



FILE NO

SERVICE MANUAL

LCD TV

LCD-DP55441

PRODUCT CODE No.: 113027304

CHASSIS NO. :

P55441-00

P55441-01



REFERENCE No.: SM0945009-01

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Attention: This service manual is only for service personnel to take reference with. Before servicing please read the following points carefully.

Safety precautions

1. Instructions

Be sure to switch off the power supply before replacing or welding any components or inserting/plugging in connection wire. Anti static measures to be taken (throughout the entire production process!):

- a) Do not touch here and there by hand at will;
- b) Be sure to use anti static electric iron;
- c) It's a must for the welder to wear anti static gloves.

Please refer to the detailed list before replacing components that have special safety requirements. Do not change the specs and type at will.

2. Points for attention in servicing of LCD

2.1 Screens are different from one model to another and therefore not interchangeable. Be sure to Use the screen of the original model for replacement.

2.2 The operation voltage of LCD screen is high voltage. Be sure to take proper measures in protecting yourself and the machine when testing the system in the course of normal operation or right after the power is switched off. Please do not touch the circuit or the metal part of the module That is in operation mode. Relevant operation is possible only one minute after the power is switched off.

2.3 Do not use any adapter that is not identical with the TV set. Otherwise it will cause fire or damage to the set.

2.4 Never operate the set or do any installation work in bad environment such as wet bathroom, laundry, kitchen, or nearby fire source, heating equipment and devices or exposure to sunlight etc. Otherwise bad effect will result.

2.5 If any foreign substance such as water, liquid, metal slices or other matters happens to fall into the module, be sure to cut the power off immediately and do not move anything on the module lest it should cause fire or electric shock due to contact with the high voltage or short circuit.

2.6 Should there be smoke, abnormal smell or sound from the module, please shut the power off at once. Likewise, if the screen is not working after the power is on or in the course of operation, the power must be cut off immediately and no more operation is allowed under the same condition.

2.7 Do not pull out or plug in the connection wire when the module is in operation or just after the power is off because in this case relatively high voltage still remains in the capacitor of the driving circuit. Please wait at least one minute before the pulling out or plugging in the connection wire.

2.8 When operating or installing LCD please don't subject the LCD components to bending, twisting or extrusion, collision lest mishap should result.

2.9 As most of the circuitry in LCD TV set is composed of CMOS integrated circuits, it's necessary to pay attention to anti statics. Before servicing LCD TV make sure to take anti static measure and ensure full grounding for all the parts that have to be grounded.

2.10 There are lots of connection wires between parts behind the LCD screen. When servicing or moving the set please take care not to touch or scratch them. Once they are damaged the screen would be unable to work and no way to get it repaired.

If the connection wires, connections or components fixed by the thermo tropic glue need to disengage when service, please soak the thermo tropic glue into the alcohol and then pull them out in case of damage.

2.11 Special care must be taken in transporting or handling it. Exquisite shock vibration may lead to breakage of screen glass or damage to driving circuit. Therefore it must be packed in a strong case before the transportation or handling.

2.12 For the storage make sure to put it in a place where the environment can be controlled so as to prevent the temperature and humidity from exceeding the limits as specified in the manual. For prolonged storage, it is necessary to house it in an anti-moisture bag and put them altogether in one place. The ambient conditions are tabulated as follows:

Temperature	Scope for operation	5 ~+ 35 °C
	Scope for storage	0 ~+ 40°C
Humidity	Scope for operation	0% ~ 90 %
	Scope for storage	0% ~ 90%

2.13 Display of a fixed picture for a long time may result in appearance of picture residue on the screen, as commonly called “ghost shadow”. The extent of the residual picture varies with the maker of LCD screen. This phenomenon doesn’t represent failure. This “ghost shadow” may remain in the picture for a period of time (several minutes). But when operating it please avoid displaying still picture in high brightness for a long time.

3. Points for attention during installation

3.1 The front panel of LCD screen is of glass. When installing it please make sure to put it in place.

3.2 For service or installation it’s necessary to use specified screw lest it should damage the screen.

3.3 Be sure to take anti dust measures. Any foreign substance that happens to fall down between the screen and the glass will affect the receiving and viewing effect

3.4 When dismantling or mounting the protective partition plate that is used for anti vibration and insulation please take care to keep it in intactness so as to avoid hidden trouble.

3.5 Be sure to protect the cabinet from damage or scratch during service, dismantling or mounting.

2. Alignment instructions

2.1. Test equipment

VG-848 (Video, YPbPr and VGA signal generator)
VG-849 (Video, YPbPr, VGA and HDMI signal generator)
FLUKE 54200(TV signal generator)
CA210 (white balancer)

2.2. Power test

Connect main board, power board and IR board according the wiring diagram, connect the power and press power key(Remote controller or Keypad) button to turn on the TV.

a) Test the pin voltage of P802/power board , the data is shown in table1:

Table1 voltage data of P802

For55"										
P802	Pin1,2	Pin3,4	Pin5,6,7	Pin8,9	Pin10,11,	Pin 12	Pin13	Pin14	Pin15	Pin16
Voltage	GND	11.6-12.8V	GND	11.6-12.8V	4.75-5.25V	NA	On:2V-5.5V Off: 0-0.5V	<0.6V	2.5-5V PWM	2-5V

b) Test the pin voltage of P803/power board, the data is shown in table2:

Table2 voltage data of P803/P804

For55"						
P803/P804	Pin1,2,3,4,5	Pin6,7,8,9,10	Pin11	Pin12	Pin13	Pin14
Voltage	22.8-25.2V	GND	NC	2V-5V	2.5-5V PWM	NC

2.3. Alignment flow-chart

The alignment flow-chart is shown as fig-1

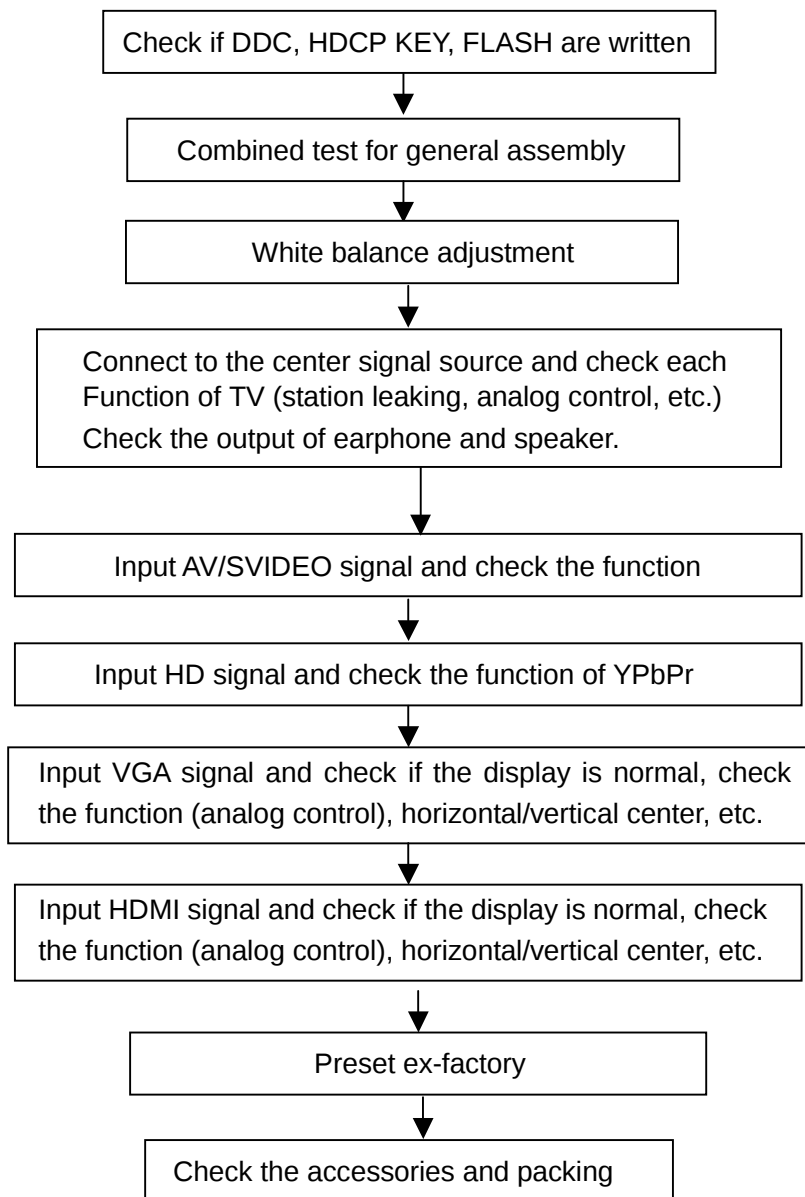


Fig-1 adjustment flow-chart

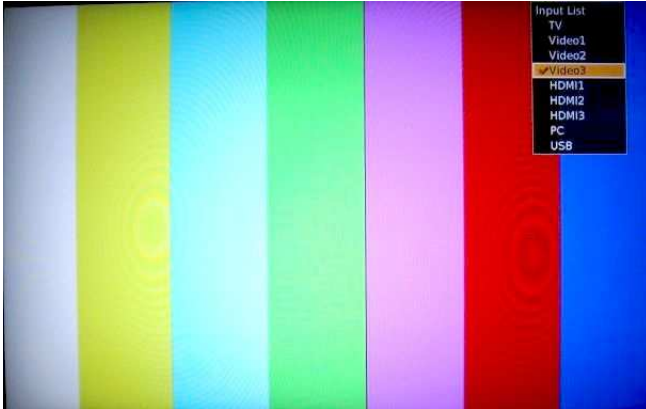
2.4. Adjustment instruction

At any input source then press the remote controller buttons "<", "EXIT" and ">" to enter factory mode.

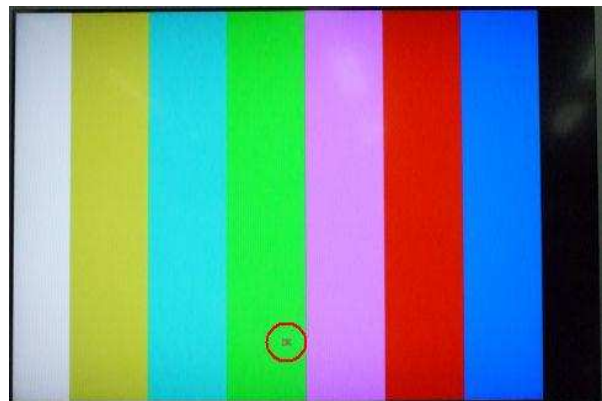
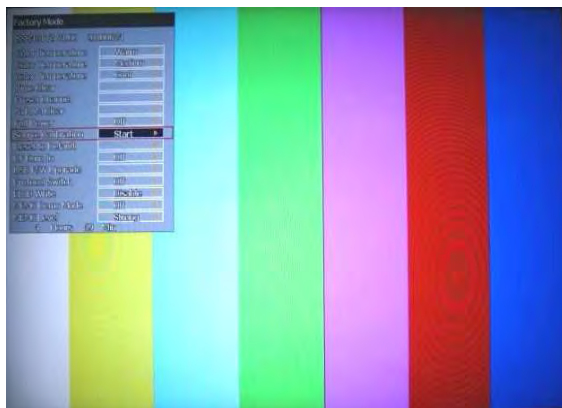
During Factory menu, if "MENU" or "EXIT" key is pushed, system will exit factory mode.

2.4-1. Source Calibration

- 4-1.1. Set the TV input source to YPbPr; ASTRO-859 signal setting to PG2 program number 933(1080i).
(PG2 mode Timing 933 and Pattern 924 100% Color Bar.)



- 4-1.2. Entering into factory Mode: Press up or down key of remote control to select "Auto Calibration", Press 「OK」 key to start.



-> Source calibration performed automatically when finished that will show OK.

- 4-1.3. Change input source to PC.
 Change Astro-859 Timing to No.953 (640x480@60Hz) and pattern on 953(8step V-grayscale).
 Repeat step 4-1.2 to do source calibration,



2.4-2. Color Temperature Adjustment & Check

4-2.1. Set input source.

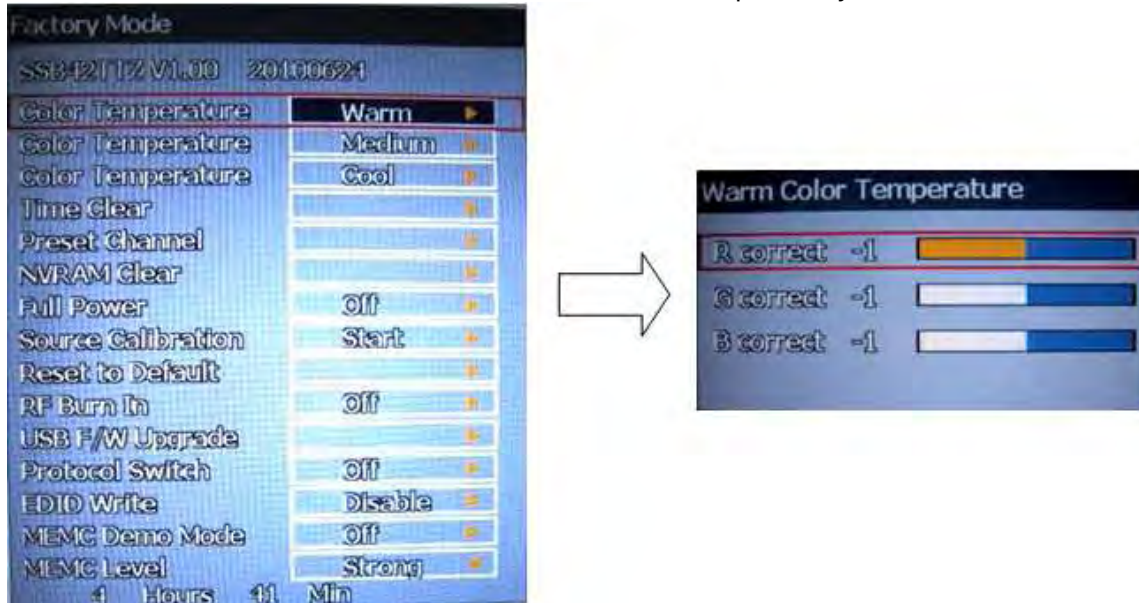
Set the signal generator Astro-859 timing to PG2-924 on Video & YPbPr, PG2-860 on HDMI, and PG2-963 on PC. Pattern sets 956 on all of the source.

Color temperature			
source	儀器	Timing	Pattern
Video	Chroma, CA210, Astro VG-859 測控調整程式	PG2 924 NTSC	PG2 956 Windows white 80% (Astro output Level set to 204)
YPbPr	Chroma, CA210, Astro VG-859 測控調整程式	PG2 924 NTSC	PG2 956 Windows white 80% (Astro output Level set to 204)
HDMI	Chroma, CA210, Astro VG-859 測控調整程式	PG2 860 1440x480i	PG2 956 Windows white 80% (Astro output Level set to 204)
PC	Chroma, CA210, Astro VG-859 測控調整程式	PG2 963 1024x768@60hz	PG2 956 Windows white 80% (Astro output Level set to 204)

Then press Astro-859 "FORMAT" key and ▼ key, then adjust RGB value to R:204, G:204, B:204



- 4-2.2. In factory mode OSD menu, select “Color Temperature” item, press “OK” key to enter the item.
R, G, B drive values are set for Warm, Medium, and Cool independently.



- 4-2.3. Set Color Temperature for “Warm” , “Medium” and “Cool” with following spec table.

Color temperature(for 42")			
Color Temp.	Cool	Medium	Warm
x	0.267	0.281	0.301
y	0.271	0.288	0.310
Tolerance	± 0.01	± 0.01	± 0.01

If the x and y value are larger than specification,
Decrease Red drive from default value.
Increase Blue drive from default value.

If the x or y or both x and y value is/are smaller than specification.
Decrease Blue drive from default value

According to a x and y value, please following adjustment of 1 or 2.

- 1 If x value is higher than spec
Decrease Red drive from default value.
- 2 If y value is higher than spec,
Increase Blue drive from default value

- 4-2.4 Exit Factory Mode:

After finishing adjusting color temperature, press [MENU] or [EXIT] to exit factory mode.

2.5. Items of Factory menu

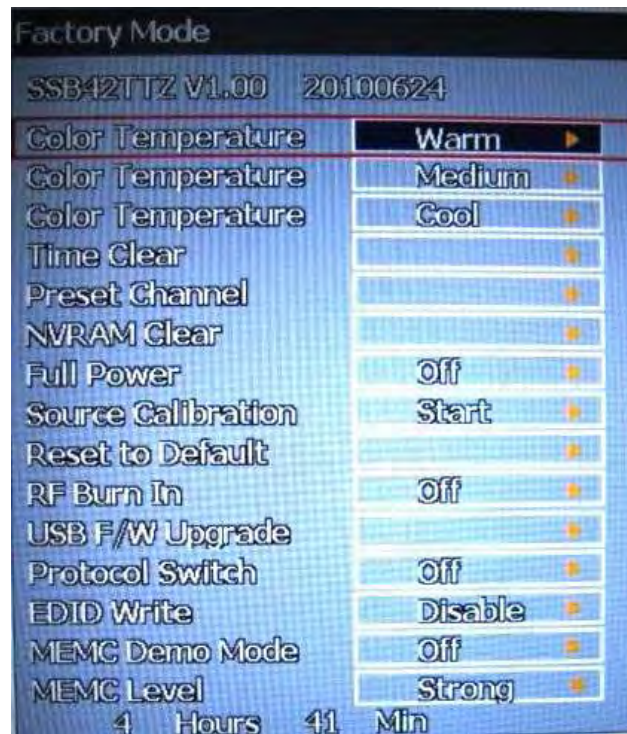
Vendor may customize design and add adjustment items Factory menu as far as all required items are included.

Press up and down key can move high light item from Color Temperature Warm -> Color Temperature Medium -> Color Temperature Cool -> Preset Channel-> Source Calibration -> Reset to Default.

The NVRAM Clear and Reset to Default items will have a check dialog “YES” and “NO” to do or not.

Push “Enter” key can select high light item function. (Press left and right can adjust value)

Display model name, firmware version and released date on top.



5-1) Color Temperature for Warm

Press up or down key can select high light item function.

Press enter key to enter the item.

Following data for color temp shall be edited manually.

-R, G, B data for each preset.

-Press "Up" or "Down" key to select "R", "G", "B" item

-Press "Left" or "Right" key to set the "R", "G", "B" value.

-Press "MENU" or "EXIT" item to exit to factory mode

5-2) Color Temperature for Medium

Press up or down key can select high light item function.

Press enter key to enter the item.

Following data for color temp shall be edited manually.

-R, G, B data for each preset.

-Press "Up" or "Down" key to select "R", "G", "B" item

-Press "Left" or "Right" key to set the "R", "G", "B" value.

-Press "MENU" or "EXIT" item to exit to factory mode

5-3) Color Temperature for Cool

Press up or down key can select high light item function.

Press enter key to enter the item.

Following data for color temp shall be edited manually.

-R, G, B data for each preset.

-Press "Up" or "Down" key to select "R", "G", "B" item

-Press "Left" or "Right" key to set the "R", "G", "B" value.

-Press "MENU" or "EXIT" item to exit to factory mode

5-4) Time Clear

Press up or down key can select high light item function.

Press "Left" & "Right" key to select the item.

The timer on bottom is to record power on time for panel life.

It was set one time on production only.

5-5) Preset Channel

This is for factory to do some tests.

5-6) NVRAM Clear

Initialize program's default values to NVRAM for following adjustment items accuracy.

In factory mode it is the first and important step to make sure all values are default value and correct.

- Reset settings: Channel table, Mode table (H/V Position, Clock, Phase), Source dependent setting (Contrast, Brightness etc.), Common setting (Volume, Language etc.), Parental Control (Rating, Password etc), Closed Caption.

To avoid a mistake initial process after factory setting is done. This item will have a check dialog to do the initial or not.

NOTICE:

After this item is processed, the DUT needs to be powered off then AC powered off.

5-7) Full Power

This is for power consumption testing.

To measure the maximum power consumption of TV set, we adjust the value of following items to maximum.

- Video: Contrast maximum value, Brightness maximum value, Backlight maximum value.
- Audio: Volume maximum value.

Press right key to turn on Full Power and OSD stay display until press enter key to recover from Full Power.

5-8) Source Calibration

Auto Calibration (gain/offset) must be adjusted color by firmware automatic adjustment in PC, and Video3(Component) input source.

This item will have a result dialog "OK" or "NG".

5-9) Reset to Default

This function is same as "NVRAM Clear", but it will power off automatically after processing this function.

5-10) RF Burn In

Use "snow" pattern for burn in. Selected items are "On" and "Off".

While turn on burn in mode, firmware will automatically turn off "Auto power off" function.

If there is no power supply suddenly, firmware will re-enter burn in mode automatically when power supply is back.

Pressed the "Power" key, firmware will automatically turn off burn in mode.

- Burn in mode: Source is "TV", Input Configuration is "Antenna" and channel is NTSC channel 2.

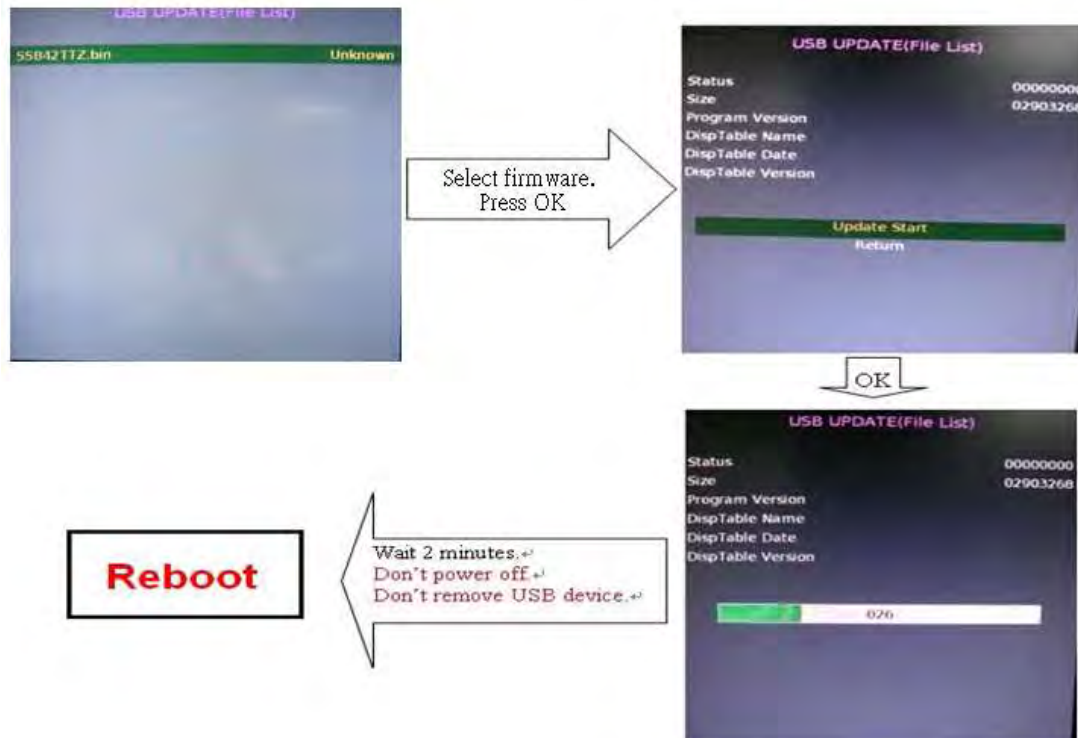
5-11) USB F/W Upgrade

The function is using USB device to upgrade firmware via USB port.

Copy the firmware file to USB device root path.

Execute this function to update firmware, the following OSD will display.

Note: After finishing updated, the system will reboot automatically



5-12) Protocol Switch

This is for debugging only. It is no use for service.

5-13) EDID Write

This is for writing EDID on the VGA source.

5-14) MEMC Demo Mode

To separate screen into two parts that left side is 60Hz and right side is 120Hz for display.

5-15) MEMC Level

Changing MEMC level to Weak, Medium or Strong.

2.6. Performance check

6-1 TV function

Connect RF to the center signal source, enter Channel menu → Channel Scan, check if there are channels be skipped, check if the picture and speaker are normal.

6-2 AV/S-Video terminals

Input AV/S-Video signal, check if the picture and sound are normal.

6-3 YPbPr/YCbCr terminal

Input YPbPr signal (VG-859 signal generator), separately input the YUV signals listed in table4 and check if the display and sound are normal at any situation (power on, channel switch and format convert, etc.)

Table4 YPbPr signal format

No	Signal mode			Horizontal frequency	Dot clock frequency	Remarks
	Signal name	Resolution	Vertical frequency(Hz)	(KHz)	(MHz)	
1	480i	720x480	59.94	15.73	27	
2	480P	720x480	59.94	31.47	27	
3	720P/60	1280x720	60	45	74.25	
4	1080i/60	1920x1080	60	33.75	74.25	
5	1080p/60	1920x1080	60	67.5	148.5	

6-4 PC(VGA) terminal

Input PC(VGA) signal (VG-859 signal generator), separately input the signals listed in table5 and check the display and sound. If the image is deflection of the Horizontal and Vertical, select Menu->PC->Auto Adjust to perform auto-correct.

Table5 PC signal format

No	Signal mode			Horizontal frequency	Dot clock frequency	Remarks
	Signal name	Resolution	Vertical frequency(Hz)	(KHz)	(MHz)	
1	VGA	640 x 480	59.941	31.469	25.175	
2	SVGA	800 x 600	60.317	37.879	40	
3	XGA	1024 x 768	60.004	48.363	65	
4	W-XGA	1280 x 768	59.87	47.776	79.5	
5		1360 x 768	60.015	47.712	85.5	
6	SXGA	1280 x 1024	60.02	63.981	108	

6-5 HDMI terminal

Input HDMI signal (VG-859 signal generator), separately input the signals listed in table6 and check the display and sound (32KHz, 44.1KHz, 48KHz) at any situation (power on, channel switch and format convert, etc.)

Table6 HDMI signal format

No	Signal mode			Horizontal frequency	Dot clock frequency	Remarks
	Signal name	Resolution	Vertical frequency(Hz)	(KHz)	(MHz)	
1	VGA	640 x 480	59.94	31.469	25.175	
2	SVGA	800 x 600	60.317	37.879	40	
3	XGA	1024 x 768	60.004	48.363	65	
4	W-XGA	1280 x 768	59.87	47.776	79.5	
5		1360 x 768	60.015	47.712	85.5	
6	SXGA	1280 x 1024	60.02	63.981	108	
7	480i	720x480	59.94	15.734	27	
8	480P	720x480	59.94	31.5	27.03	
9	720P/60	1280x720	60	45	74.25	
10	1080i/60	1920x1080	60	33.75	74.25	
11	1080p/60	1920x1080	60	67.5	148.5	
12	1080p/24	1920x1080	24	27	74.25	

6-6 other functions check

- a) Check the turn on/turn off timer, sleep timer, picture/sound mode, OSD, stereo and analog TV Close Caption, V-Chip, etc.

3. Working principle analysis of the unit

1. NTSC/ATSC signal flow:

Antenna reception NTSC/ATSC signal will be sent to tuner U32, then Tuner will be demodulating and output differential IF+ IF- signal .

These differential IF+ IF- signal will send to the master control IC U1 to video/MPEGII decode, de-interlace and scaler, then output LVDS level drive for panel display.

The differential signals will be fed into U1 to demodulate audio signals , after demodulating, pre-amplifying, bass adjusting and volume control, the sound signal will be transform into digital I2S signal by scaler IC and sent to digital amplifier U5 amplifying, then output to speaker.

2. AV VIDEO signal flow

Video path AV signal switch by menu "Inpput list" via terminal socket, the signal and the Video1 path AV signal will be fed to U1 to perform video decode, de-interlace and scaler, then output LVDS drive level for panel display.

Audio signal from AV terminal via matched resistance is fed to U1 to bass adjust and volume control, the sound signal will be transfered into digital I2S signal by scaler IC and sent to digital amplifier U5 amplifying, output to speaker.

3. PC/YPrPb signal flow

PC and the Video2 and Video3 path YPbPr signal are via terminal sent to U1 A/D conversion, output R/G/B of 24 bit to back end module to digital decode, image scale, then send to LVDS level drive for panel display.

Sound signal of PC/YPrPb terminal via matched resistance and sent to U1 to bass adjust and volume control, the sound signal will be transform into digital I2S signal by scaler IC and sent to digital amplifier U5 amplifying, then output to speaker.

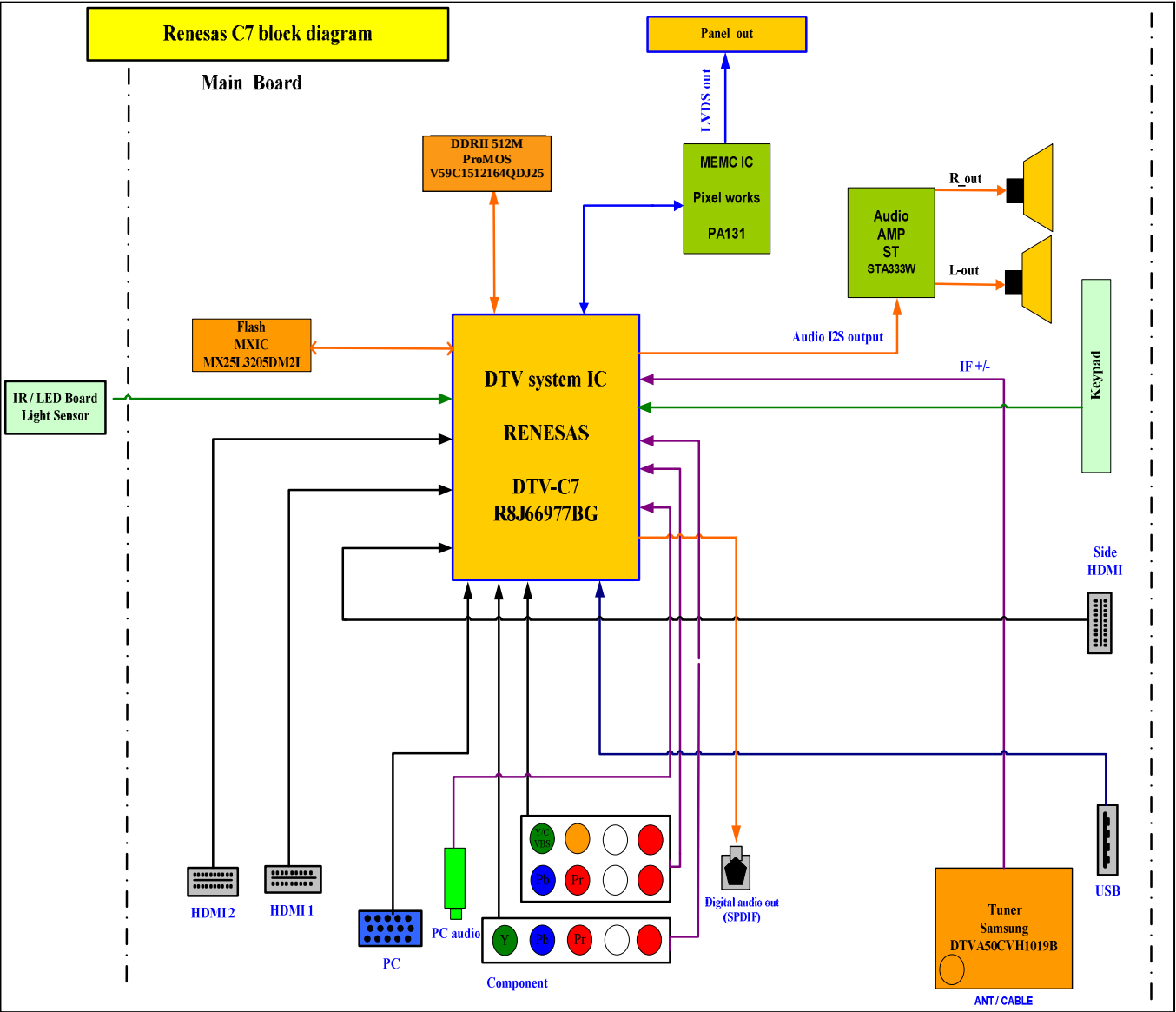
4. HDMI signal flow

HDMI video signal via terminal sent to U1 to digital decode, image scale, then output LVDS drive level for panel display. HDMI audio signal via decoder built-in terminal sent to U1 is fed to back end to bass adjust and volume control, the sound signal will be transform into digital I2S signal by scaler IC and sent to digital amplifier U5 amplifying, then output to speaker.

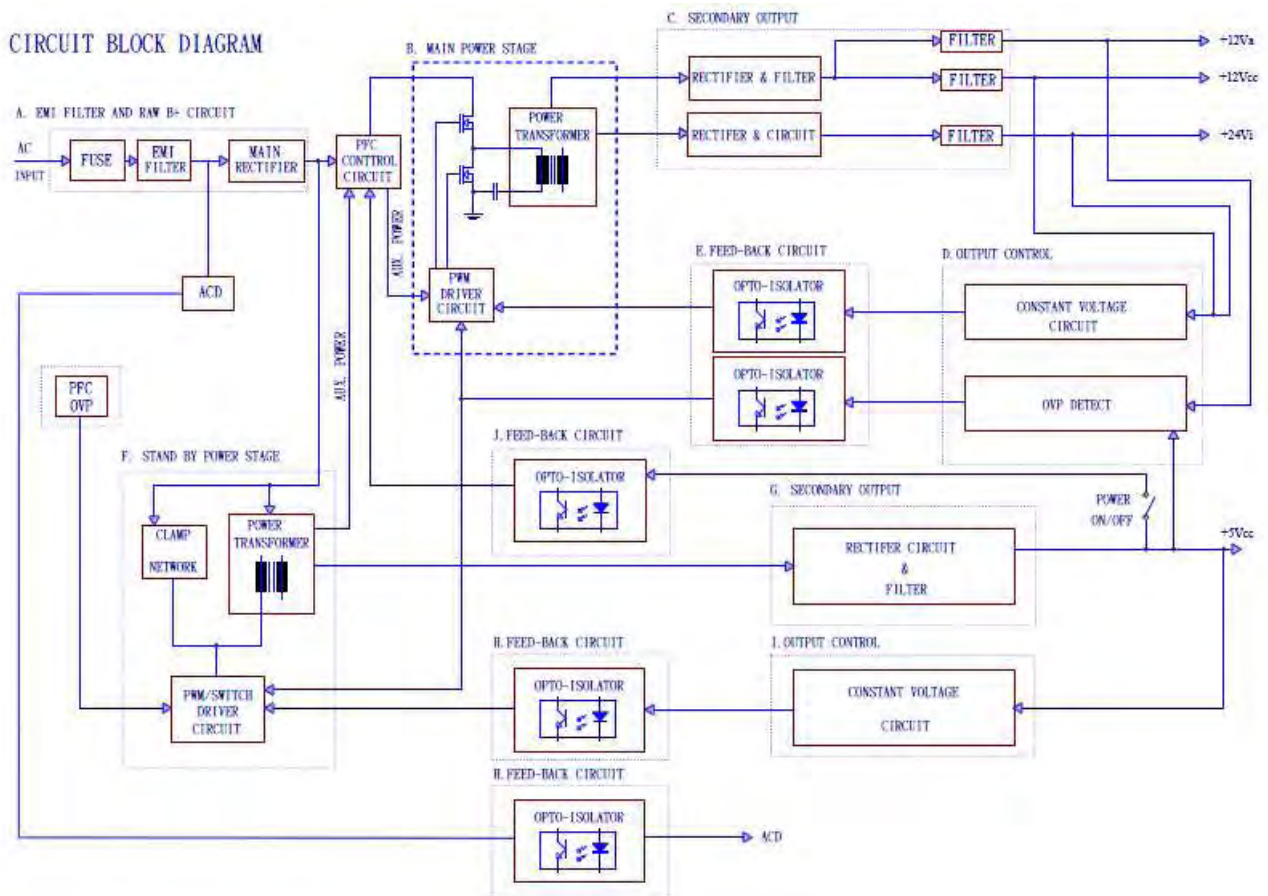
5. MEDIA signal flow

The JPEG file via USB terminal send to U1 to MPEG decode , image scale , then output LVDS drive level for panel display .

4. Block diagram-SANYO 55" ATSC model System Diagram



Block diagram-POWER-55”



5.IC block diagram

5-1. Renesas , R8J66977BG-RFJZ

Model - SubModel	Surround	Maximum panel size	Number of HDMI ports
R8J66977BG-RFJZ	Simple surround	FullHD (1920 x 1080)	3

Features

Main CPU

- 32bit RISC Super-H architecture SH3 CPU core

Demodulator

- ATSC A/53 compliant 8VSB receiver /w QAM.
- IF AGC control interface x1ch

System decoder (Stream demultiplexer)

- Video and audio ES stream filtering x1
- Section filtering: max. 32 PIDs

MPEG video decoder

- Single ISO-13818-2 MP@ML or MP@HL support
- Supports decoding of all ATSC-compliant formats

JPEG decoder

- Decode Base-line JPEG file

2D Graphics

- CEA-608/CEA-708-B closed caption support

Display processor, Video input/output

- Full 10bit processing
- MPEG Noise Filter (De-blocking/De-ringing)
- Over Drive (Panel resolution : up to WXGA)
- Inputs : CVBS x3, Y/C x2, YPbPr x2, RGB x1, HDMI x3
- Outputs : 10-bit dual LVDS

Audio decoder, Audio input/output

- ATSC A/52 Clear QAM compliant audio decoding support
- Sound Demodulator
- Inputs : SIF x1, Stereo x6
- Outputs : PCM (I2S) x2, S/PDIF x1, Stereo x1

Peripheral interfaces

- UART x1, Legacy serial interface x2, USB High Speed x1
- General purpose I/Os

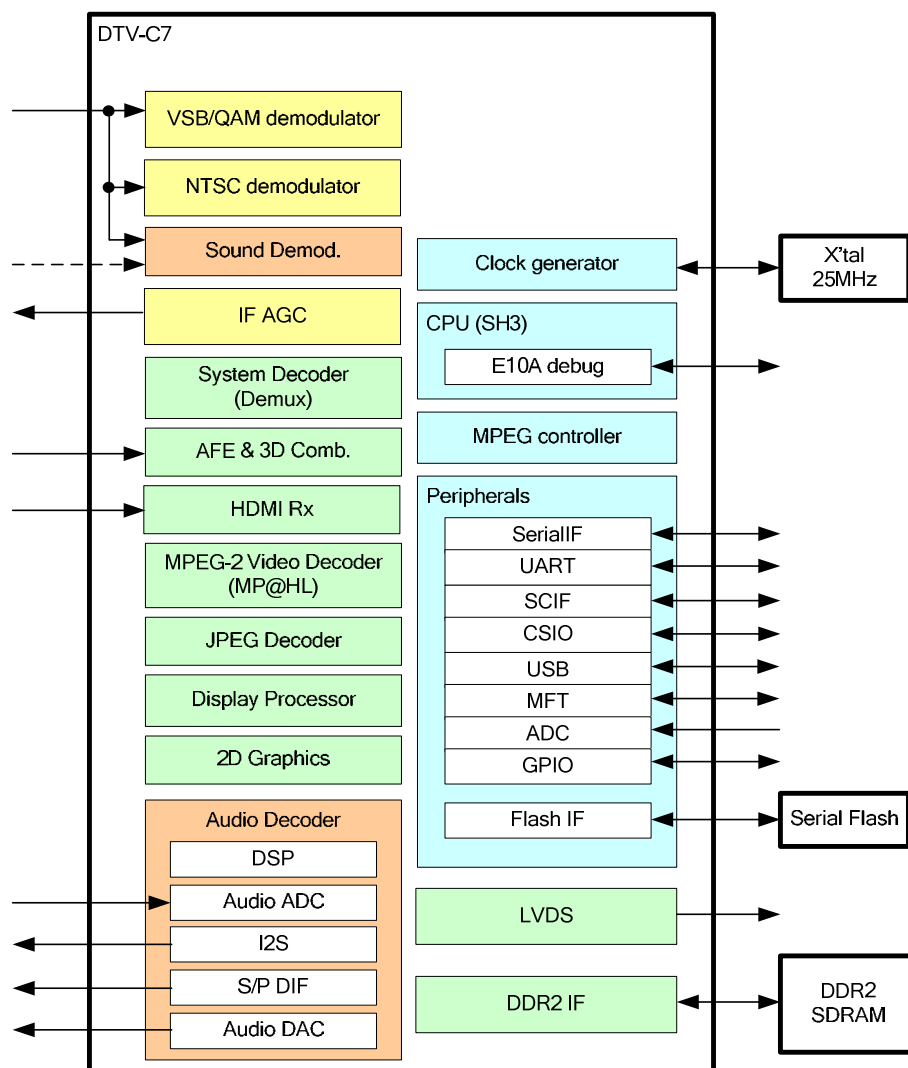
Memory interfaces

- Serial Flash
- 16b width DDR2 800Mbps(5-5-5) SDRAM x 1

Power, clock and package

- 1.26(±0.06)V, 1.82(±0.08)V, 3.3(±0.15)V
- 25MHz X'tal
- 376pin PBGA

5-2. C7 Block diagram

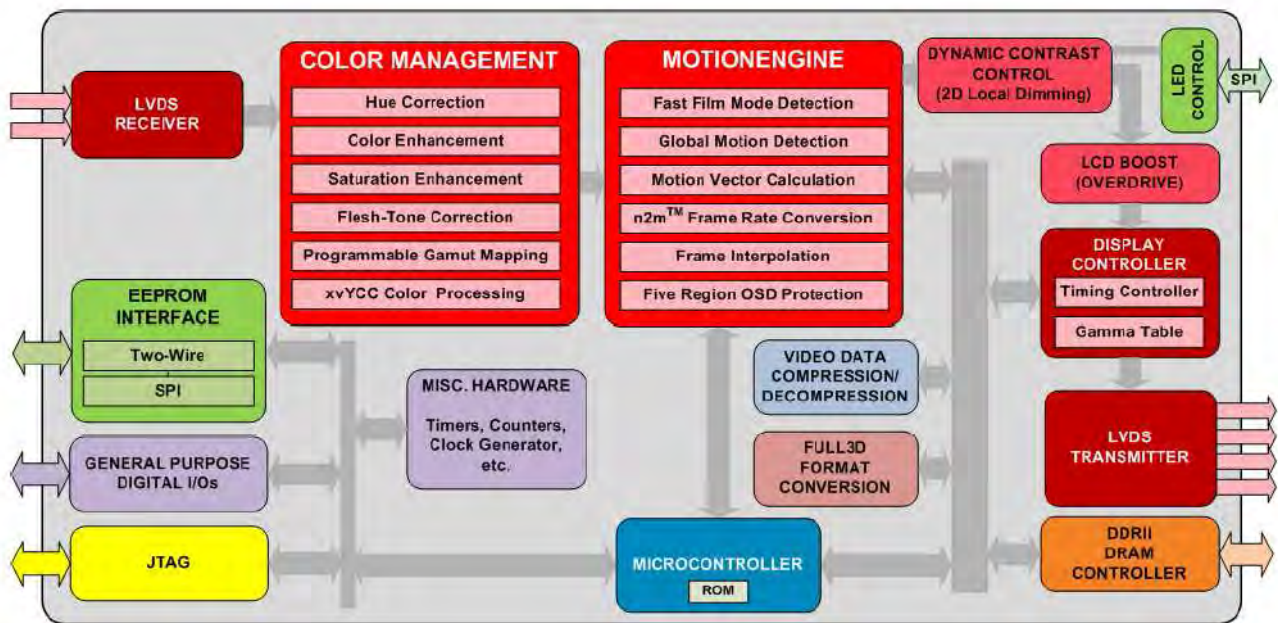


5.3 Pixelworks PA131

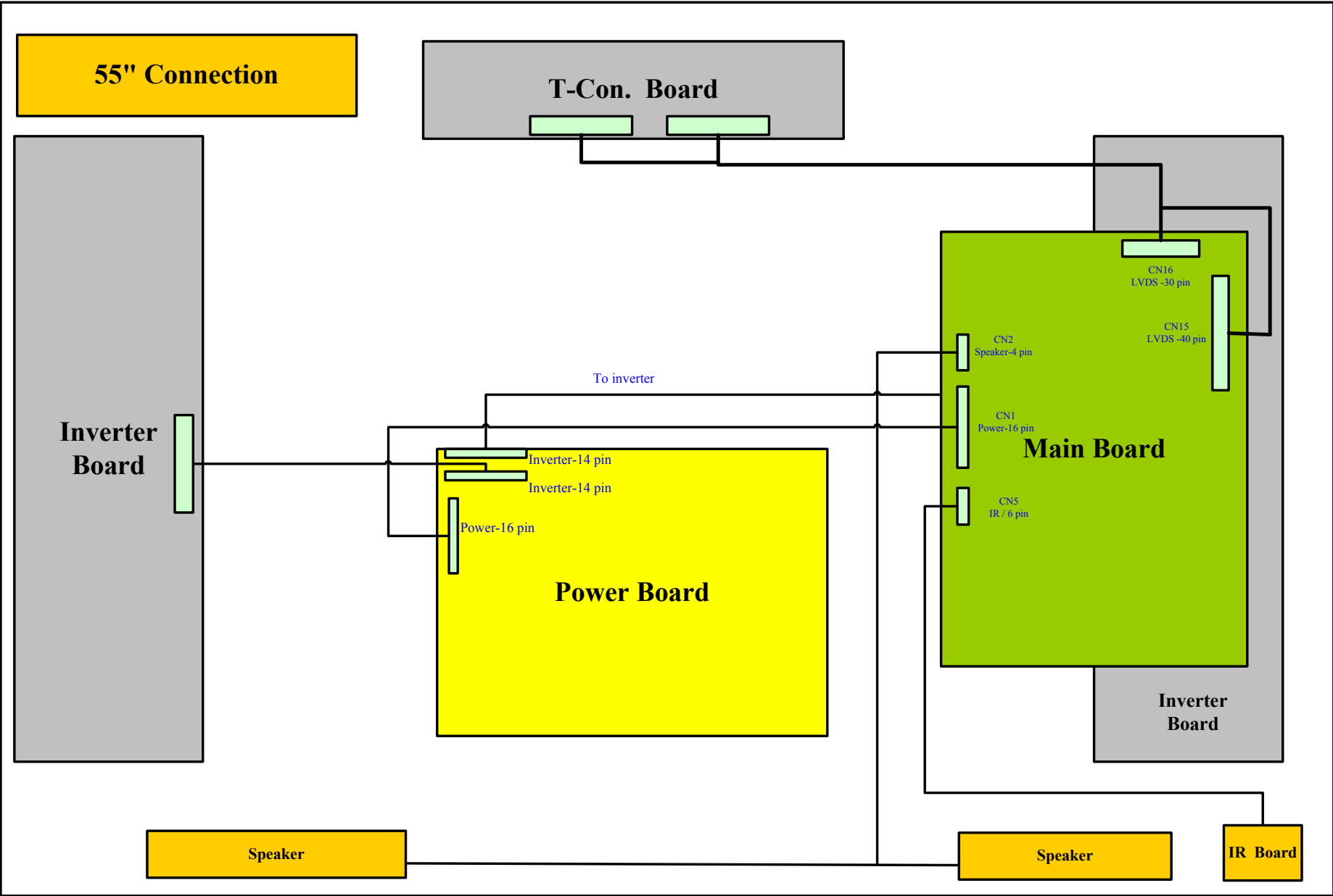
Features

- **Fourth Generation MotionEngine Technology**
 - Significantly improved Content Adaptive Motion Estimation and Motion Compensation (MEMC) using Pixelworks' proprietary technology
 - Support for up to 120Hz displays at 1080p and WUXGA resolutions
 - Progressive hardware film mode detection with 3:2/2:2 inverse pull down and programmable random cadence detection
 - 10-bit Full HD Video processing in 4:2:2 format
 - 10-bit graphics in 4:4:4 format
 - Integrated Overdrive
 - Programmable OSD region protection (up to 5 OSD regions)
 - Automatic OSD/logo detection and protection
 - Support for demo modes
- **Input Port**
 - 24/30-bit LVDS receiver
 - 170MHz maximum input clock frequency for 1080p@60Hz and WUXGA@60Hz
 - Spread-spectrum supported
 - Control Interfaces: Two-wire serial interface, GPIO, UART and SPI
- **Integrated MCU**
 - Master mode: no external CPU is needed. PA131 operates as the main controller chip
 - Slave mode: PA131 controlled by an external CPU
 - Watch-dog
 - Multiple timers
 - SPI flash
 - Interrupt controller
 - UART
 - JTAG
- **Memory Controller**
 - 16-bit DDR2 up to 333MHz clock rate
 - 256Mb/512Mb/1Gb
 - Spread-spectrum supported
- **Output Port**
 - 4 channel LVDS transmitter up to 595MHz
 - Supports dual-frame output
 - Support for Spread-spectrum

5-4. PA131 Block diagram



55” Block



6.Wiring Connection

VTV-L55712

CN1	
1	GND
2	GND
3	12V
4	12V
5	GND
6	GND
7	GND
8	12V
9	12V
10	5V
11	5V
12	5V
13	Power ON
14	AC OFF Detect
15	BACKLIGHT_ADJ
16	BACKLIGHT_EN

VTV-L55712

CN3	
1	5V
2	IR Receive
3	GND
4	RED LED
5	GREEN LED
6	Light Sensor

3.5V

3.1V

0-4V

CN2	
1	SPK_OUTR+
2	SPK_OUTR-
3	SPK_OUTL-
4	SPK_OUTL+

3.3V

1-3V

5V

VTV-L55712

CN15			
1	VDD	21	GND
2	VDD	22	GND
3	VDD	23	Panel SEL
4	VDD	24	GND
5	TX1OUT0M	25	TX2OUT0M
6	TX1OUT0P	26	TX2OUT0P
7	TX1OUT1M	27	TX2OUT1M
8	TX1OUT1P	28	TX2OUT1P
9	TX1OUT2M	29	TX2OUT2M
10	TX1OUT2P	30	TX2OUT2P
11	GND	31	TX2CLKM
12	GND	32	TX2CLKP
13	TX1CLKM	33	TX2OUT3M
14	TX1CLKP	34	TX2OUT3P
15	GND	35	TX2OUT4M
16	GND	36	TX2OUT4P
17	TX1OUT3M	37	GND
18	TX1OUT3P	38	DCR_EN
19	TX1OUT4M	39	BACKLIGHT_ADJ
20	TX1OUT4P	40	DCR_ADJ

VTV-L55712

CN16			
1	TX3OUT0M	16	TX3OUT4P
2	TX3OUT0P	17	GND
3	TX3OUT1M	18	GND
4	TX3OUT1P	19	TX4OUT0M
5	TX3OUT2M	20	TX4OUT0P
6	TX3OUT2P	21	TX4OUT1M
7	GND	22	TX4OUT1P
8	GND	23	TX4OUT2M
9	TX3CLKM	24	TX4OUT2P
10	TX3CLKP	25	TX4CLKM
11	GND	26	TX4CLKP
12	GND	27	TX4OUT3M
13	TX3OUT3M	28	TX4OUT3P
14	TX3OUT3P	29	TX4OUT4M
15	TX3OUT4M	30	TX4OUT4P

Power/B

P802		P803		P804	
1	GND	1	24V	1	24V
2	GND	2	24V	2	24V
3	12V	3	24V	3	24V
4	12V	4	24V	4	24V
5	GND	5	24V	5	24V
6	GND	6	GND	6	GND
7	GND	7	GND	7	GND
8	12V	8	GND	8	GND
9	12V	9	GND	9	GND
10	5V	10	GND	10	GND
11	5V	11	NC	11	NC
12	DIM_S	12	BLON	12	BLON
13	Power ON	13	DIM	13	DIM
14	ACD 0V	14	DIM_S	14	DIM_S
15	BL_ADJ	1-3V		5V	
16	BL_EN	5V		1-3V	

7. Trouble Shooting

7-1. Fault clearance

Before calling your dealer or service center for assistance, check the matters below once again.

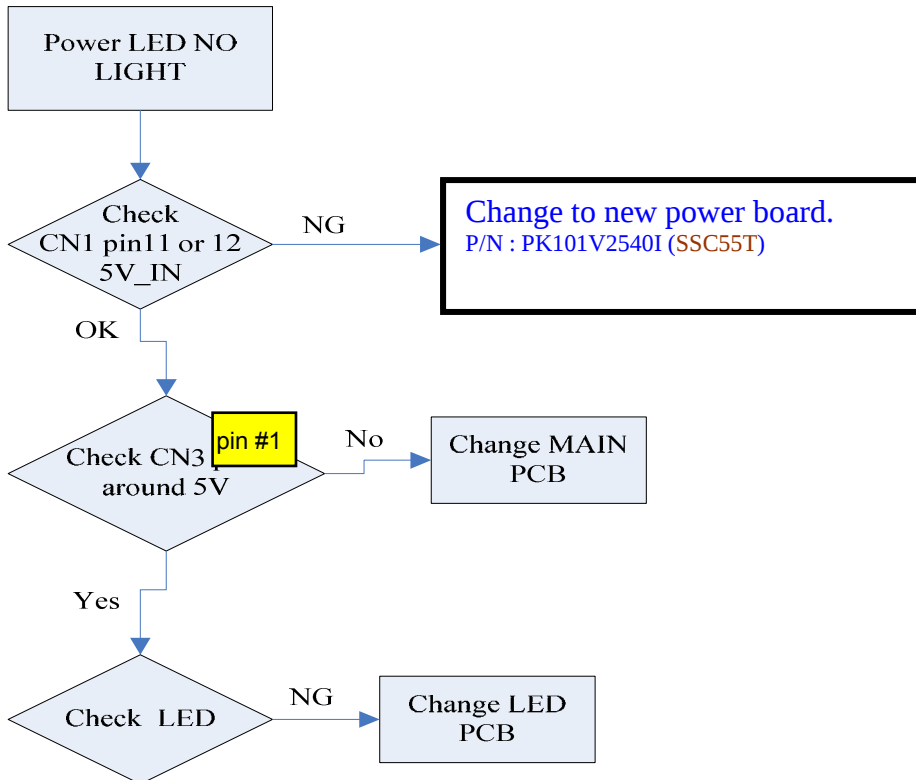
1. Make sure you have connected LCD TV to your equipment as described in the section "CONNECTING LCD TV".
2. Check cable connection. Verify that all external equipment and power cords are properly connected.
3. Verify that all power is switched on.
4. If LCD TV still does not produce an image, re-start the external equipment.
5. If the image still does not appear, unplug LCD TV from the external equipment and check the external equipment. The problem may be with your graphics controller rather than with LCD TV. (When you reconnect LCD TV, remember to turn the external equipment and TV off before you power up LCD TV. Power the equipment back on in order of LCD TV and external equipment.)
6. If the problem still exists, check the following chart.

Problem	Try these Solutions
NO POWER	• Plug this LCD TV into the AC outlet. • Press POWER key on side control or on Remote Control to open this LCD TV. • Check POWER Indicator. If this indicator flashes, this TV has getting trouble.
Remote Control does not work	• Check the batteries. • Make sure nothing is between the Remote Receiver and the Remote Control. • Make sure you are not too far from LCD TV when using Remote Control. • Maximum operating range is 16.4'(5m). • Is direct sunlight or strong artificial light shining on LCD TV 's Infrared Remote Receiver? Eliminate the light by closing curtains, pointing the light in a different direction, etc.
No image	• Check the connection between the external equipment and LCD TV. • When turning LCD TV on, it takes a few seconds to display the image. • Check the system that you select is corresponding with the external equipment or the video equipment. • Make sure the temperature is not out of the Operating Temperature (0°C ~ 40°C). • Turn off power, then turn on again, re-start LCD TV.
No sound	• Check Audio cable connection from Audio input source. • Adjust the Sound System. • Press VOLUME (+) button. • Press MUTE button.
There are tiny black points and/or bright point on the TV	• Dark or bright points of light (red, green, or blue) may appear on the screen. This is a characteristic of the LCD panels, not a malfunction of the LCD TV. • LCD panel is being produced with very high accuracy technology. There is 99.99% or more dot pixel, but there is also 0.01 % or less of dot pixel lack or dot pixel that is constantly lighted. This is not defect. • Regarding LCD panel characteristic, it may occur picture remain (look like a mirror) when the screen is changed if it displays same screen for a long time. Changing the picture or turn-off the power supply may recover. • Stripe pattern (more, interference stripes) may show up on the screen depend on the reflected picture.
Abnormal color of image	• Adjust the value of color. • Select different color system.

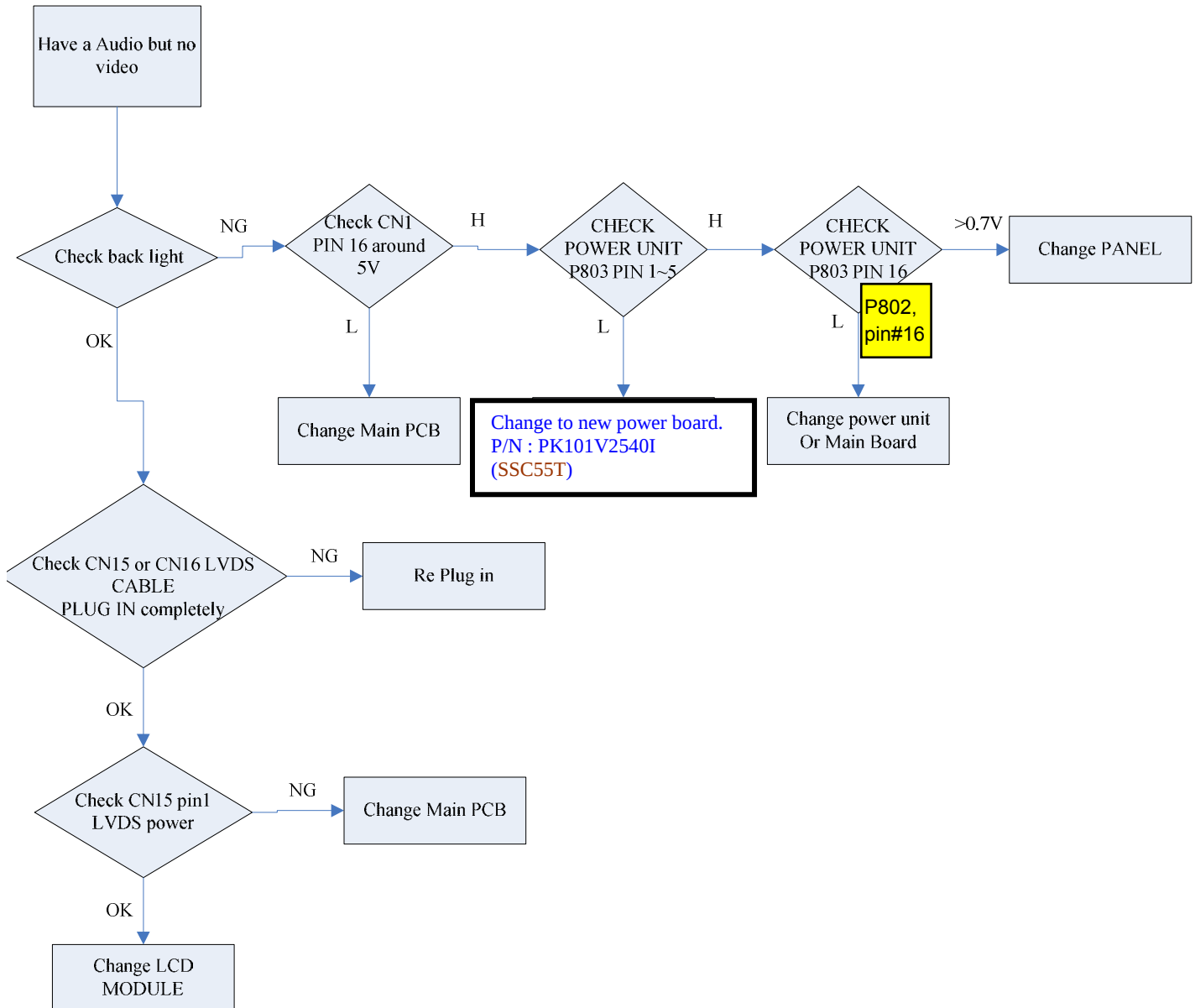
7-2. Troubleshooting guide

The flow chart shown below will help you to troubleshoot your Television set with it doesn't display normally. Each procedure offers a simple way to check for system errors. Before starting, ensure that there is a signal in and that the Television is turned on.

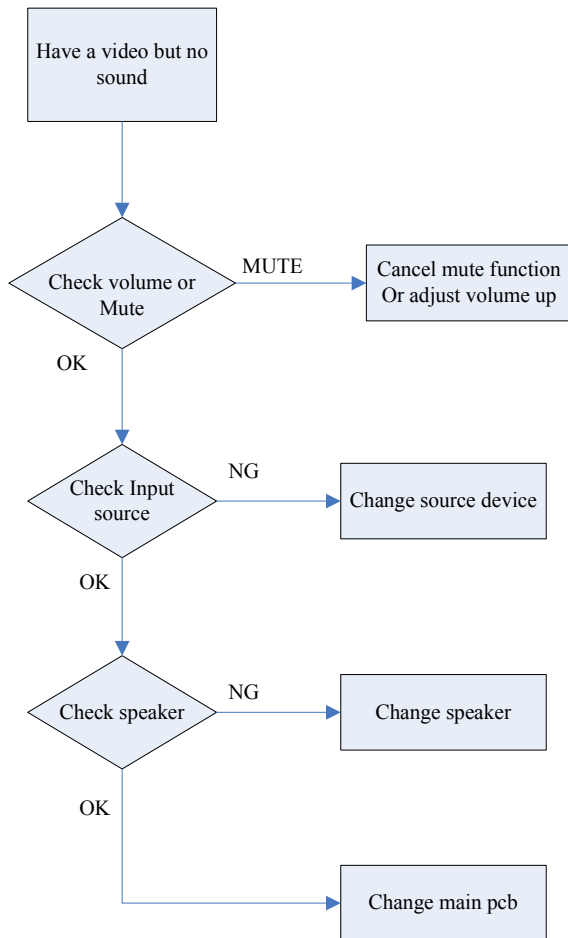
7.2-1 Power LED no light

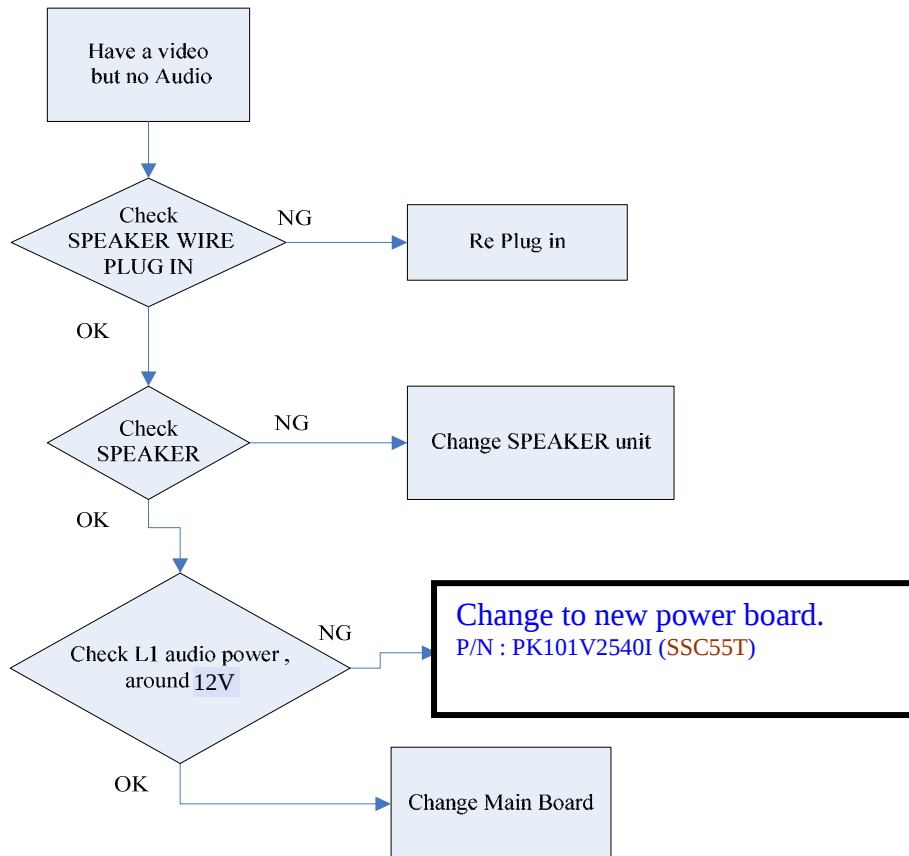


7.2-2 Has audio but no video out



7.2-3 Has video but no audio out





8. SCHEMATIC DIAGRAM ELECTRON-55"

Sheet Index

Page 03 - System Power

Page 04 - C7 & MCU / Key

Page 05 - C7 & Tuner Input

Page 06 - C7 & Video Input

Page 07 - C7 & VGA Input

Page 08 - C7 & HDMI Input

Page 09- C7 & Audio Input

Page 10 - C7 & Debug IO / FLASH ROM

Page 11- C7 & Power

Page 12 - C7 & DDRII-800

Page 13 - C7 & LVDS Output

Page 14 - C7 & Audio Out

Page 15 - Audio Amplifier

Page 16 - PA131_LVDS

Page 17 - PA131_DDR2

Page 18 - PA131_MISC

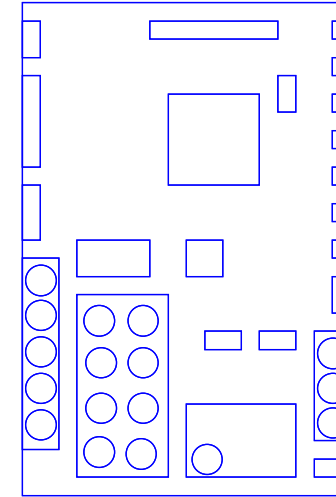
Page 19 - PA131_POWER

Page 20 - Board_Power_Supply

- Notice
1. All Res. is 0603.
2. All Cap. is 0402 (<=0.47uF), 0603 (<=1uF), 0805 (<=10uF).
- 0402
- NPO 5pF/50V, 10pF/50V, 22pF/50V, 27pF/50V, 33pF/50V, 36pF/50V, 47pF/50V, 220pF/50V
- X7R 100pF/25V, 470pF/25V, 1000pF/25V, 2200pF/25V, 3300pF/25V, 0.01uF/25V, 0.01uF/50V, 0.022uF/25V
- X5R 1uF/10V
- Y5V 0.1uF/25V, 0.33uF/10V, 0.47uF/10V
- 0603
- Y5V 0.1uF/50V, 0.47uF/25V, 1uF/16V
- X5R 10uF/6.3V
- 0805
- X5R 4.7uF/16V
- Y5V 0.47uF/50V, 0.68uF/50V, 1uF/50V, 3.3uF/10V, 10uF/10V
- 1206
- Y5V 4.7uF/35V
- 1210
- Y5V 10uF/35V
3. The mark "#" to indicate that Part disuse.

Renesas Scaler

MAIN PCB1



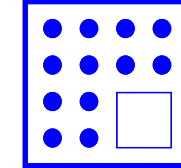
VTV-L55712 REV:1

FW1

FIRMWARE

FW SSC55T REV1.0

EMlcover1

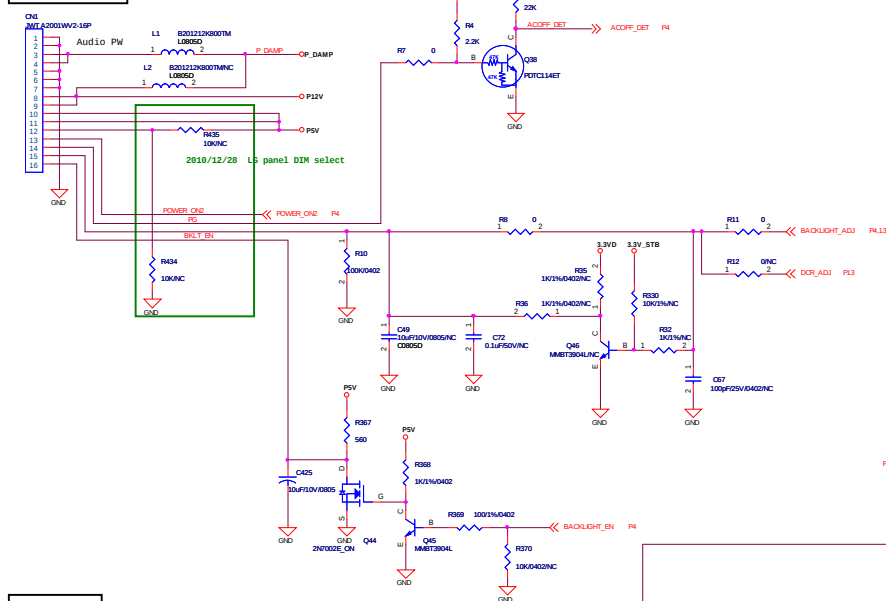


EMlcover-C7

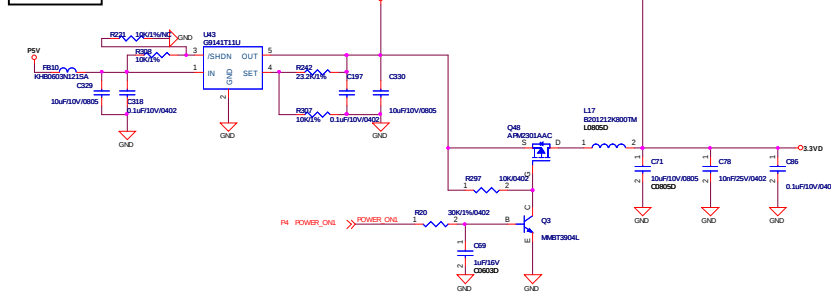
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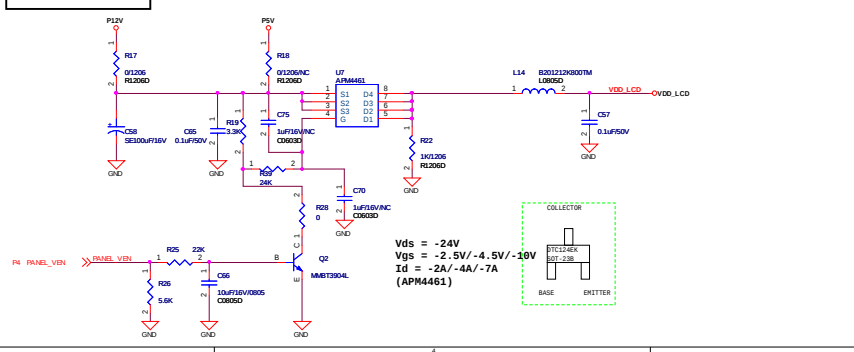
Power Module Input



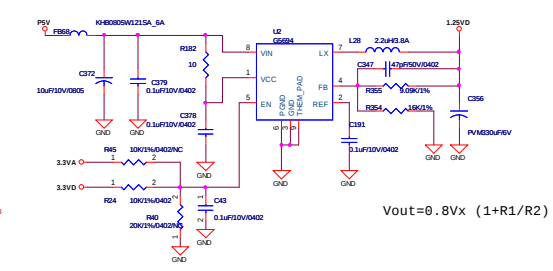
Standby Power



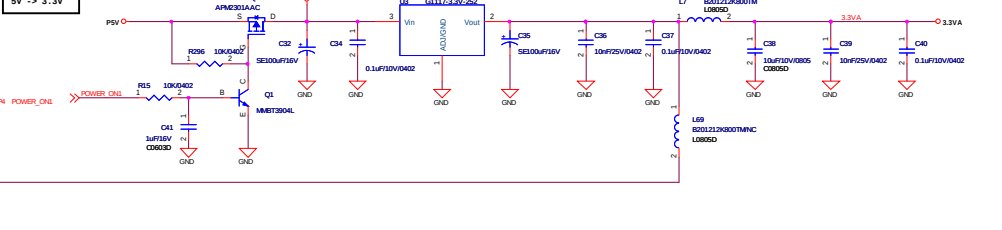
LCD PANEL POWER MosFET



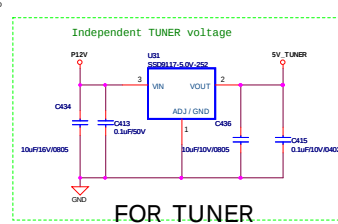
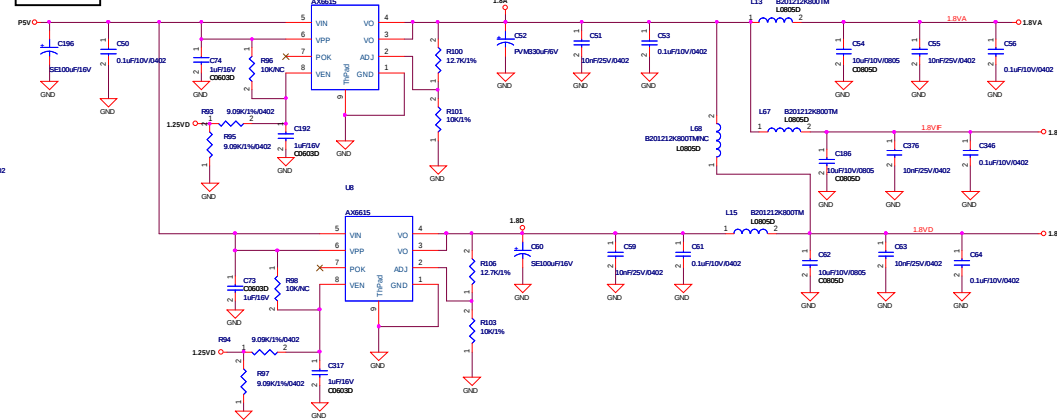
DC - DC FROM VCC TO 1.25V(2A)



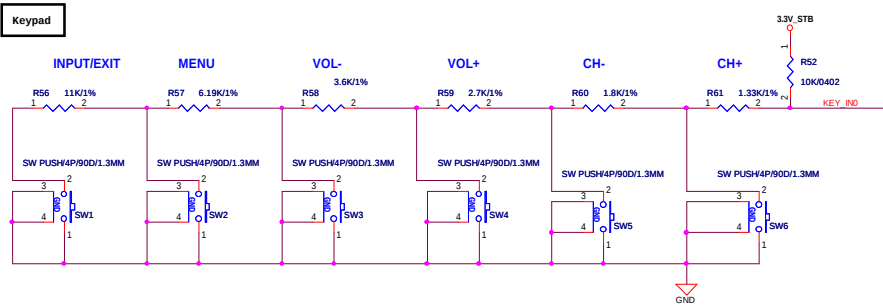
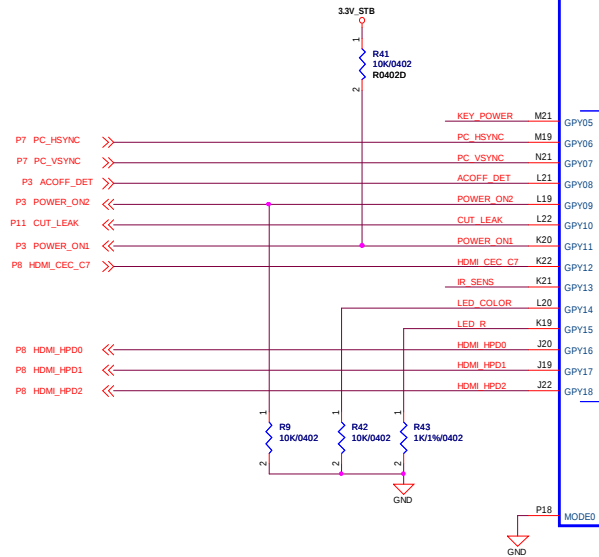
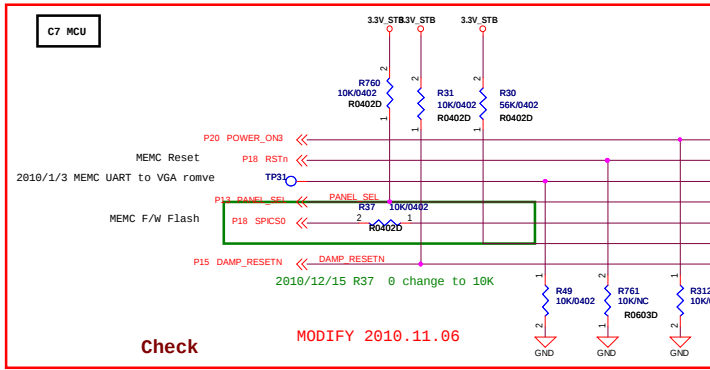
5V -> 3.3V



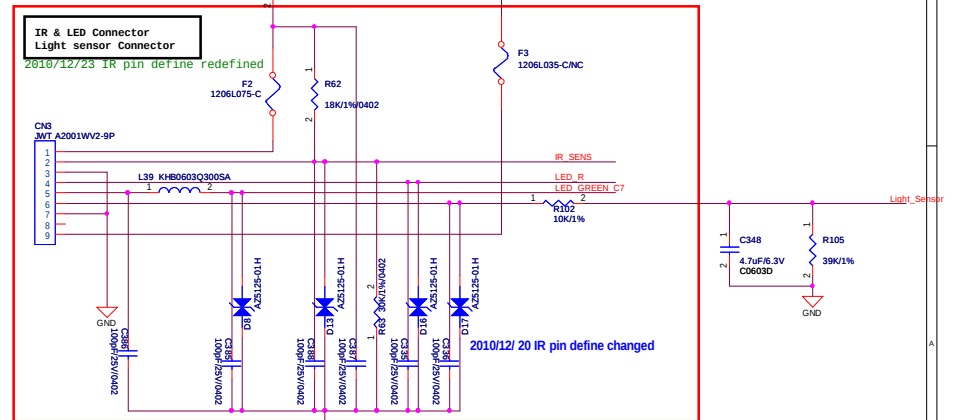
5V -> 1.8V



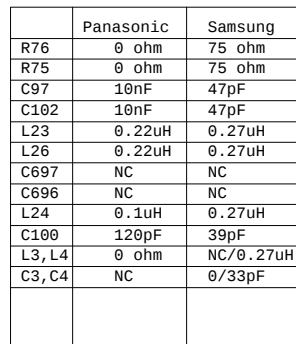
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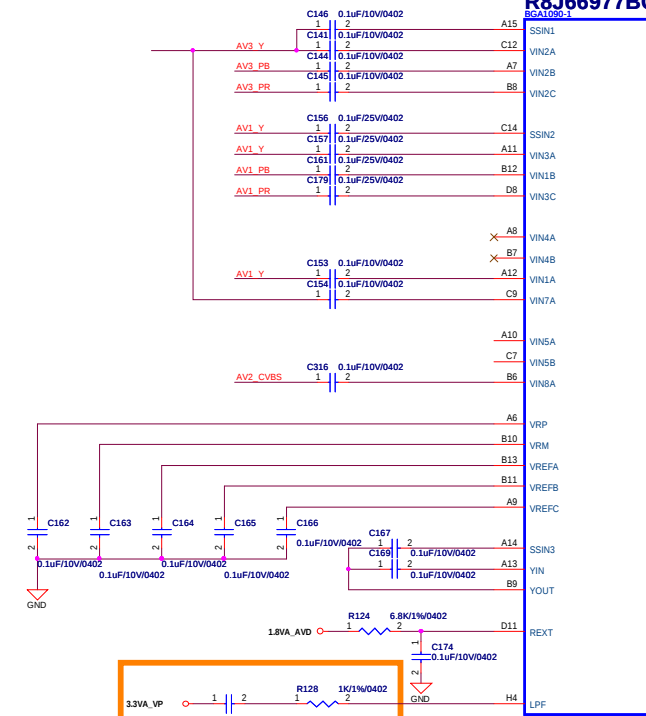
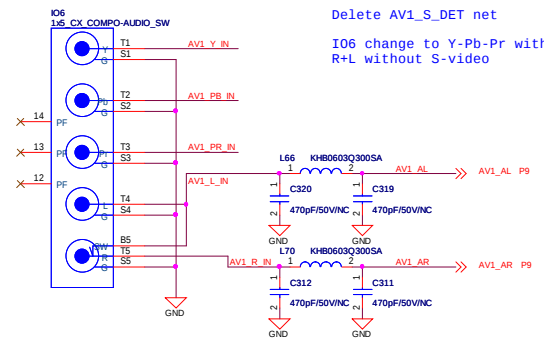
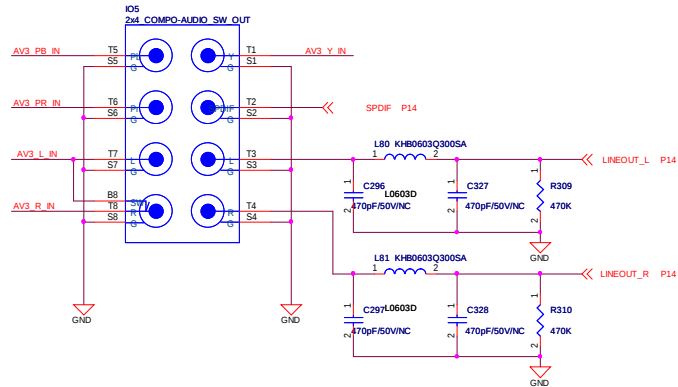
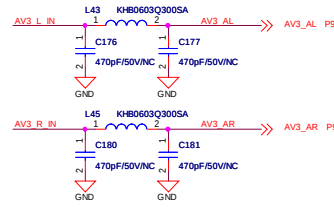
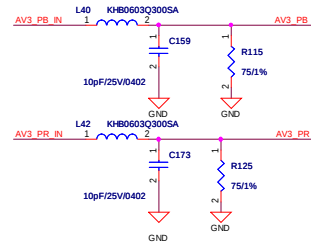
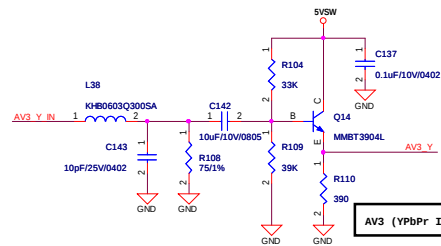


- Interface pin define**
1. 5V
 2. IR Receive
 3. GND
 4. RED LED
 5. GREEN LED
 6. Light Sensor
 7. GND
 8. A-D_Key_P
 9. A-D_Key_F

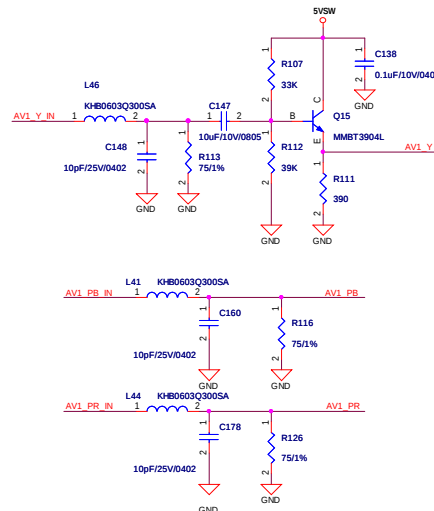
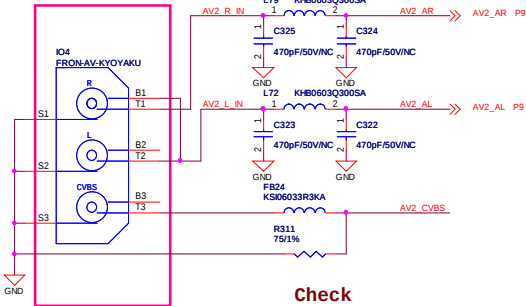


Default Setting Samsung tuner

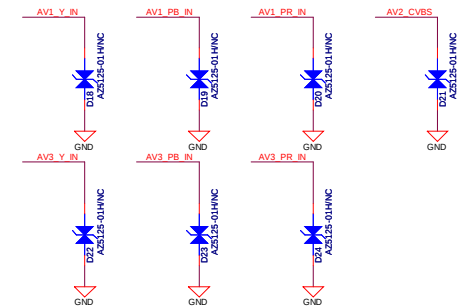




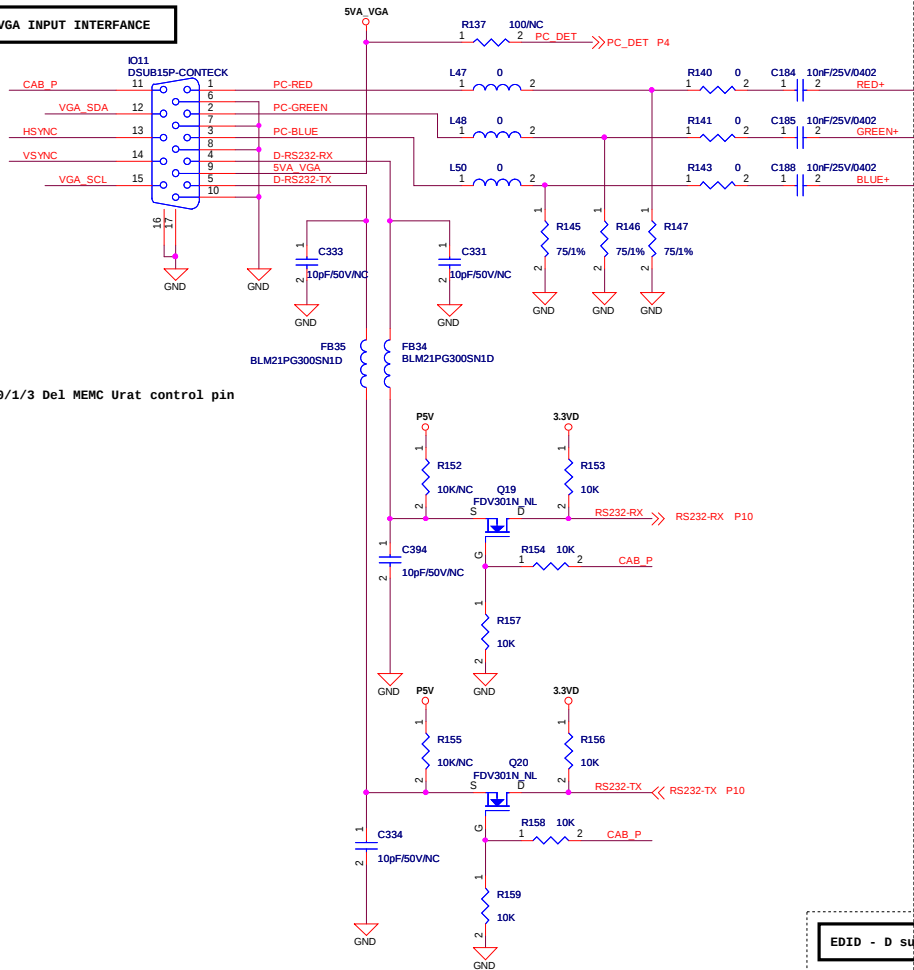
CLOSE TO C7



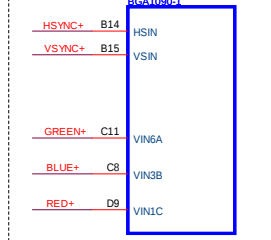
ESD Strategy



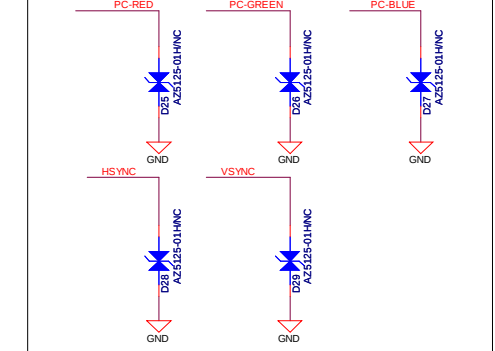
VGA INPUT INTERFACE



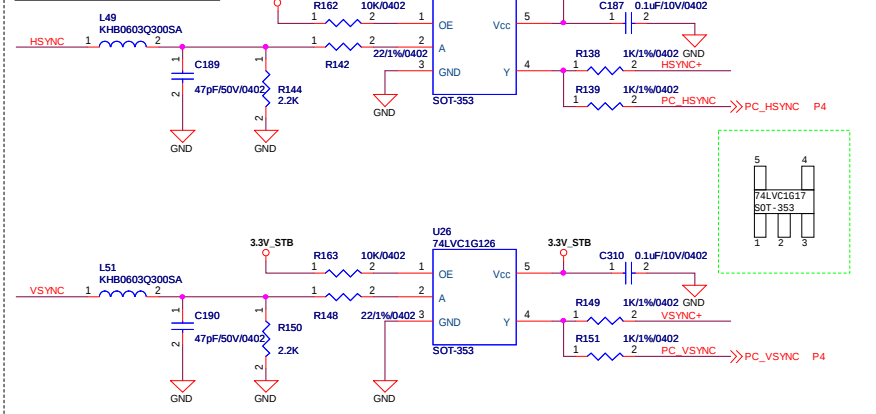
U1D R8J66977BG



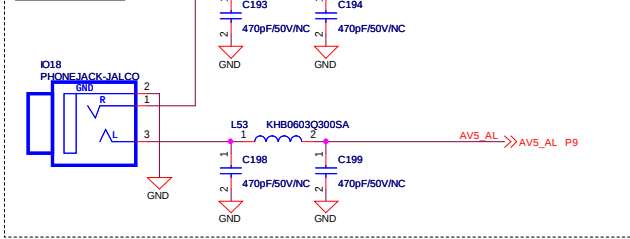
ESD Strategy



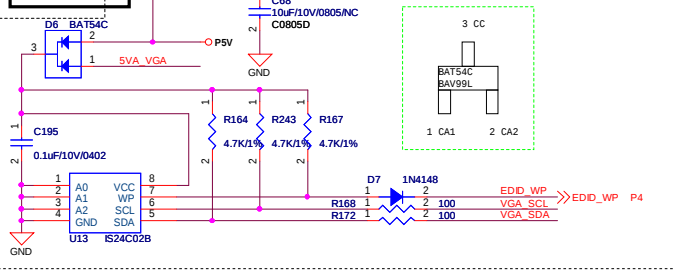
V-SYAC & H-SYAC BUFFER



PC Audio in

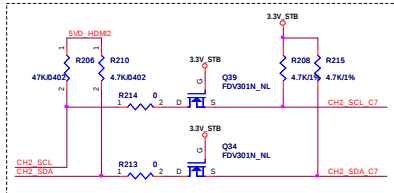
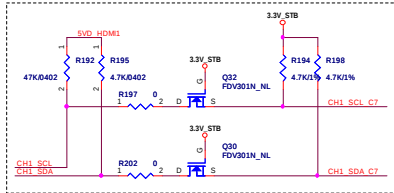
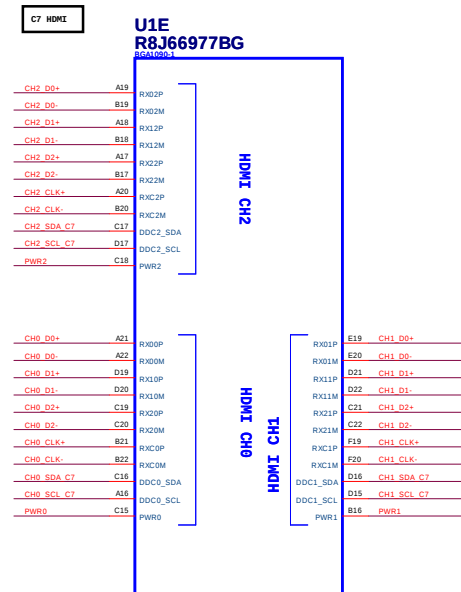
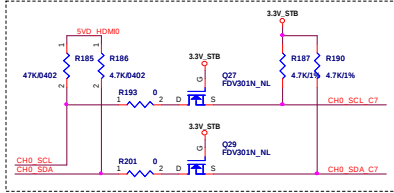


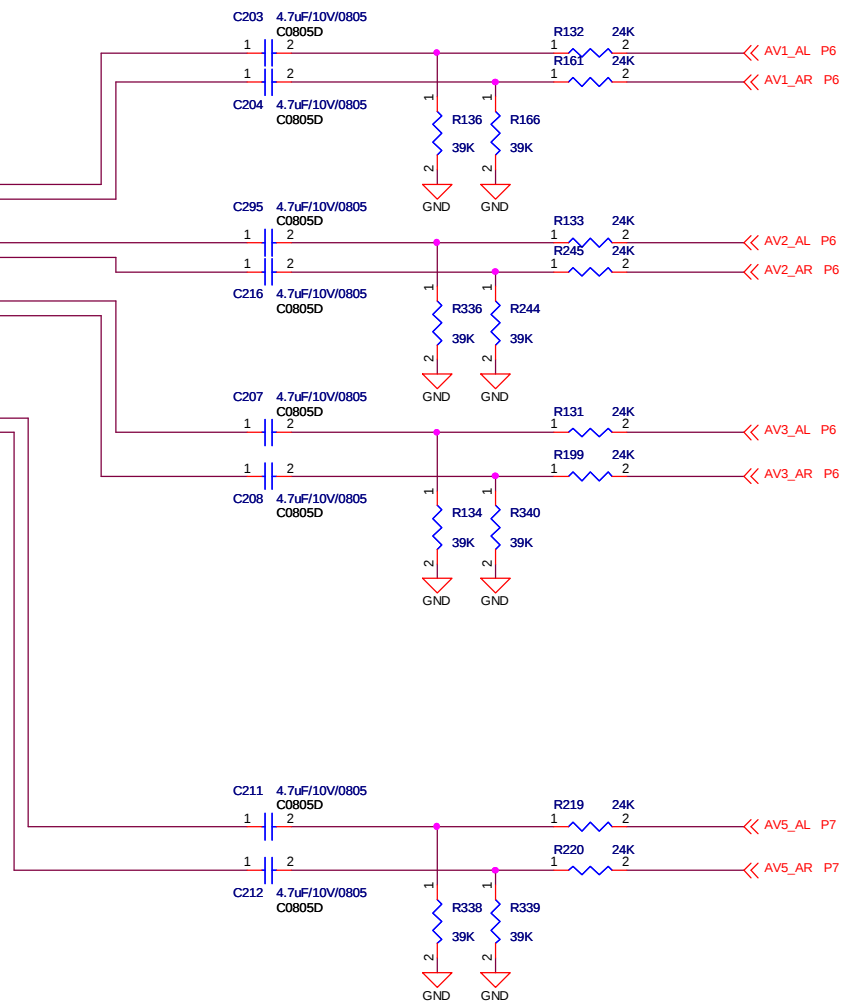
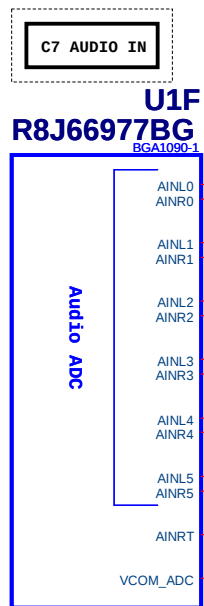
EDID - D sub



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AV1 (YPbPr Input)

AV2 (CVBS Input)

AV3 (YpbPr Input)

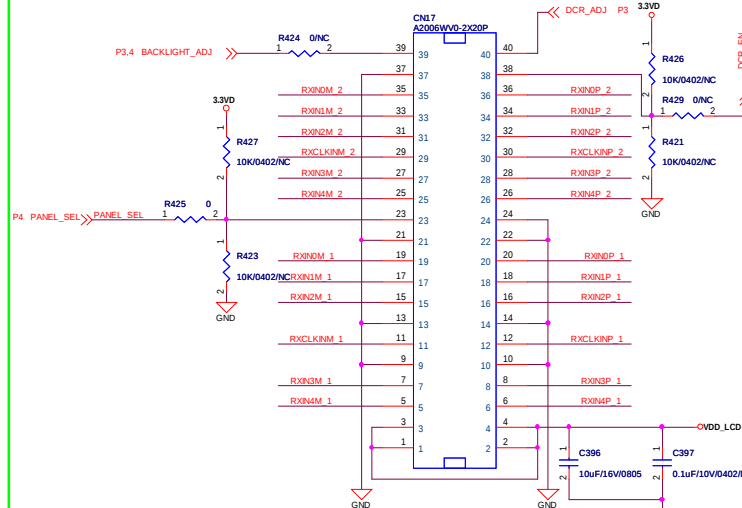
AV5 (PC Input)

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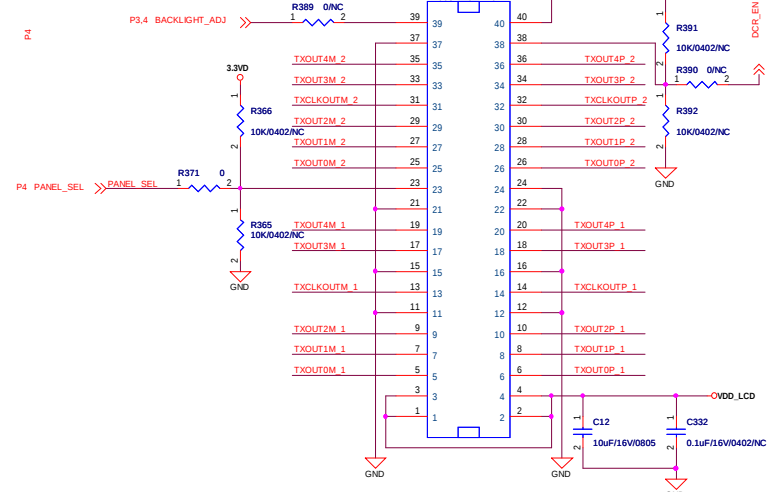
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U1K
R8J66977BG
BGA1090-1

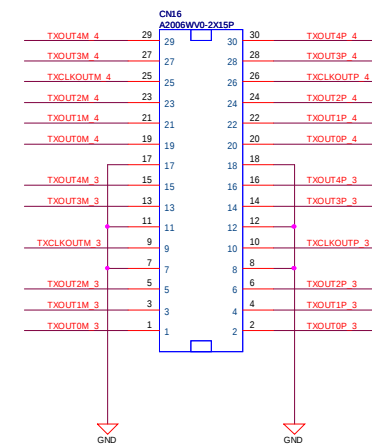
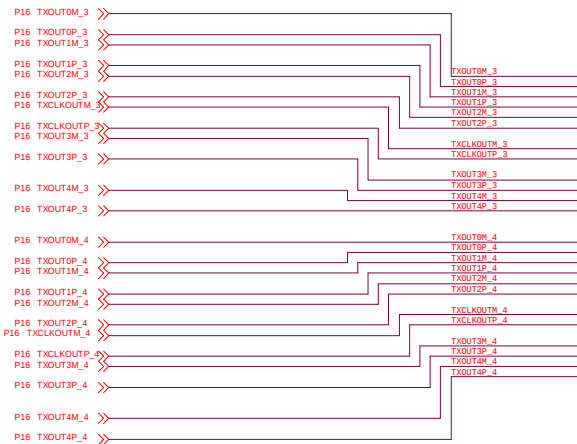
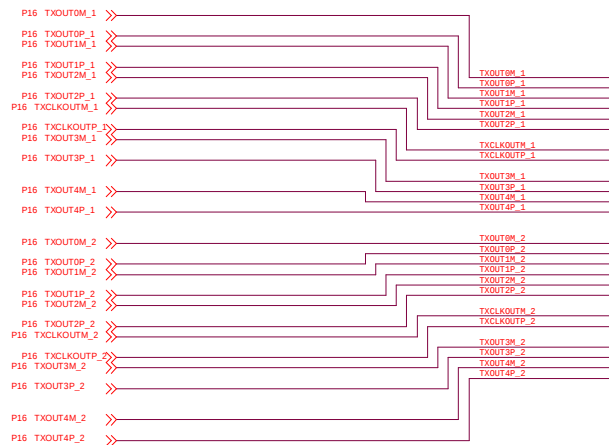
C7 LVDS



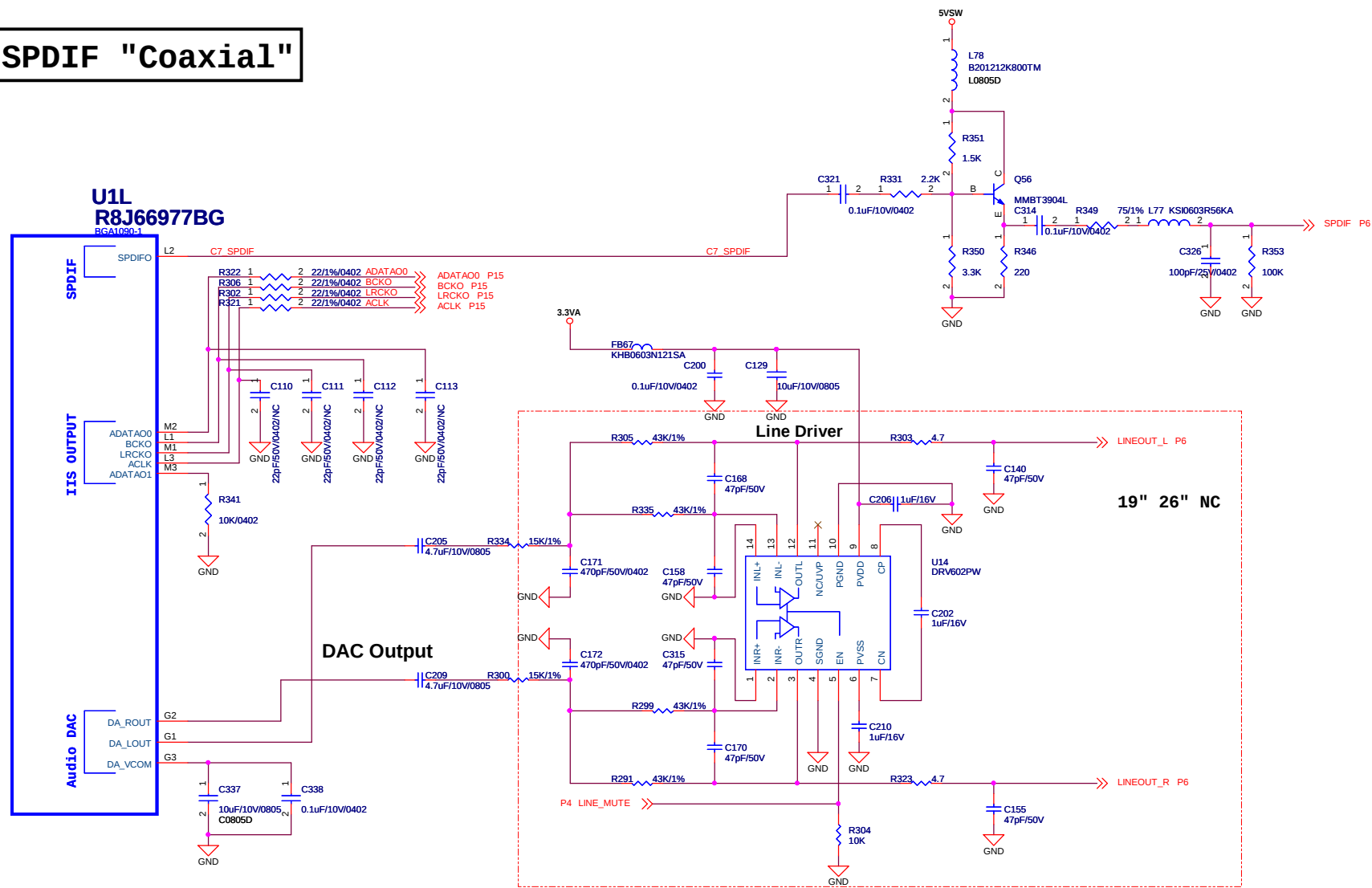
LVDS TX 1-2



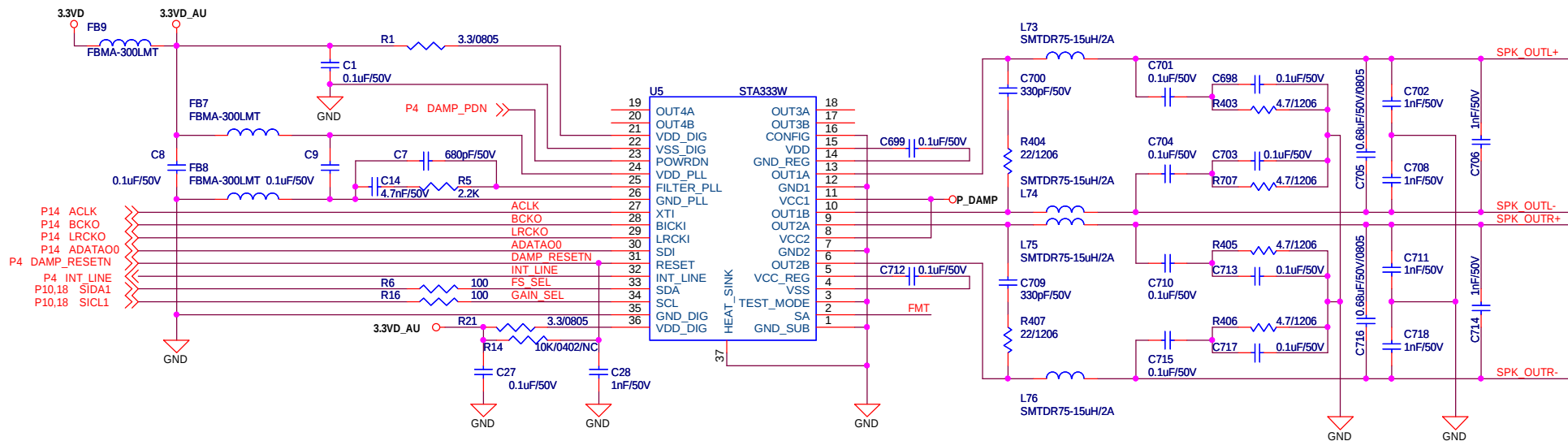
LVDS TX 3-4



SPDIF "Coaxial"



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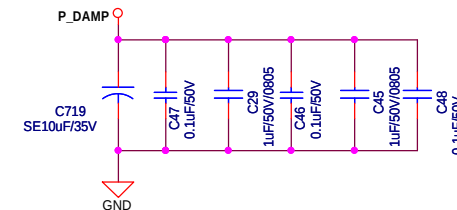
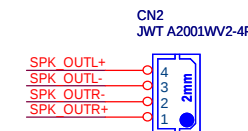


P14 ACLK
P14 BCKO
P14 LRCKO
P14 ADATAO0
P4 DAMP_RESETN
P4 INT LINE
P10,18 SDA1
P10,18 SCL1

	SPEAKER 6 ohm	SPEAKER 8 ohm	SPEAKER 16 ohm
L73, L74 L75, L76	15 uH	22 uH	47 uH
R403, R707 R405, R406	4.7 ohm	6.2 ohm	12 ohm
C705, C716	0.68 uF	0.47 uF	0.22 uF

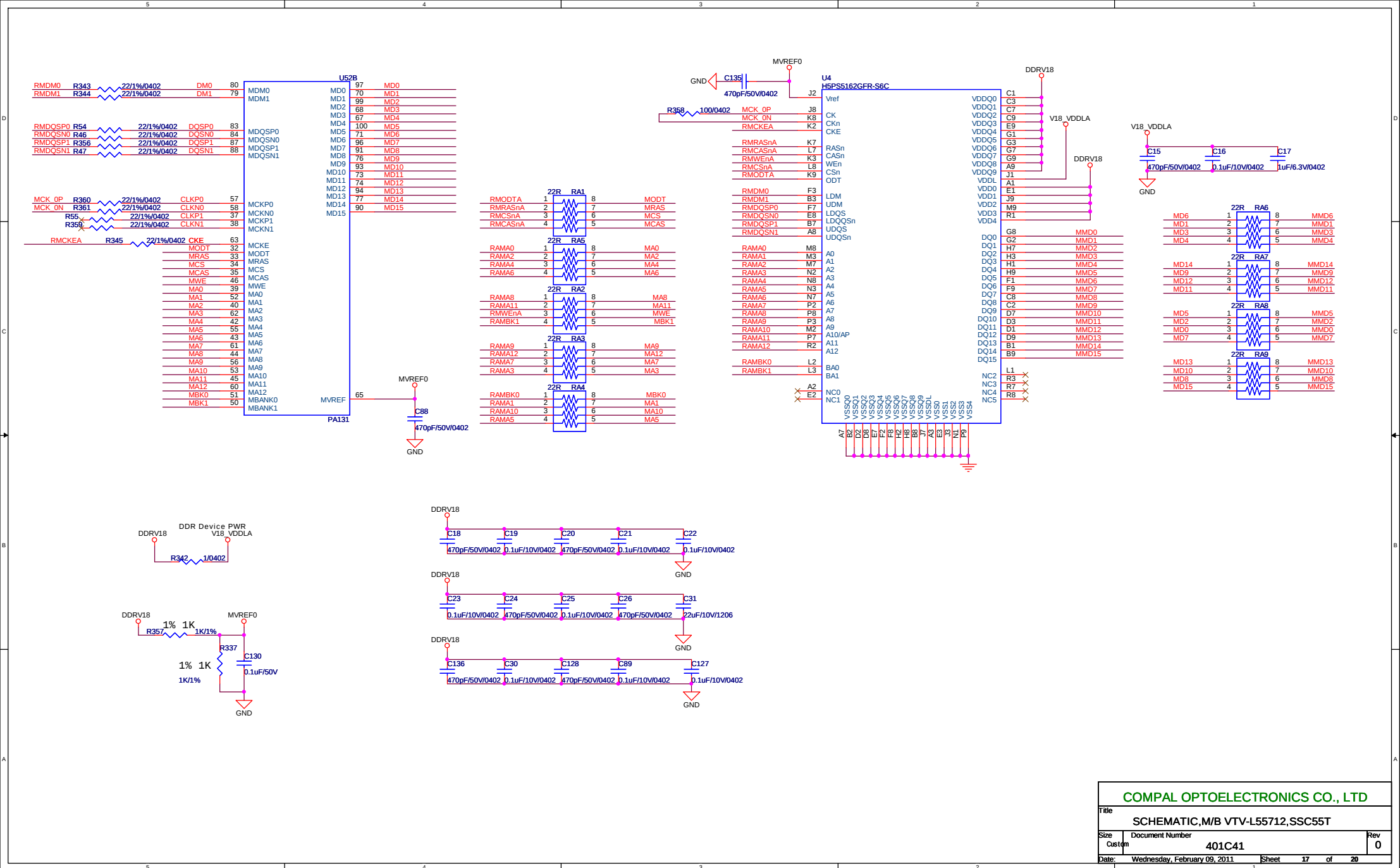
2010/12/29 DEL DAMP_GND and parts

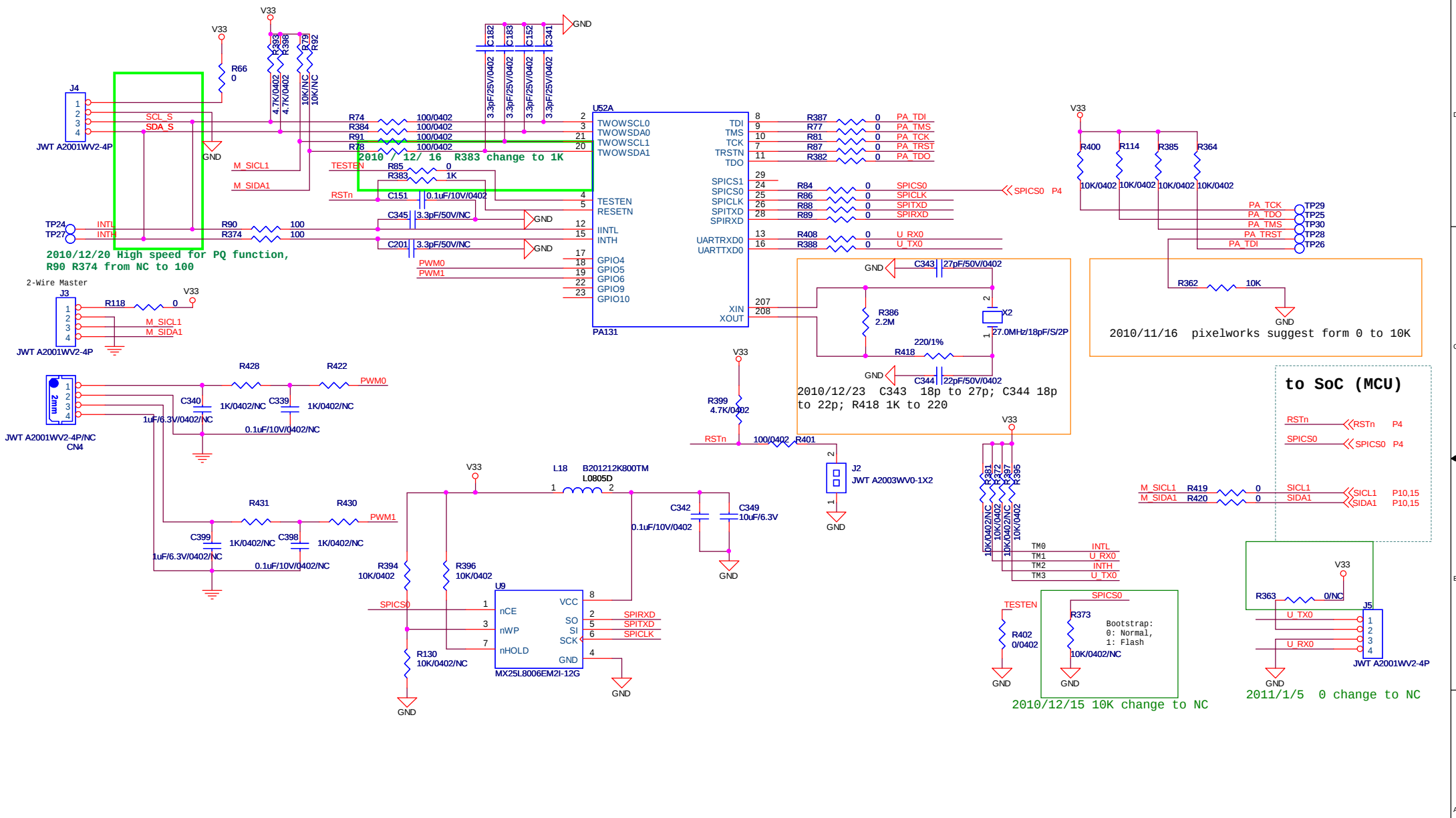
SPKER OUT

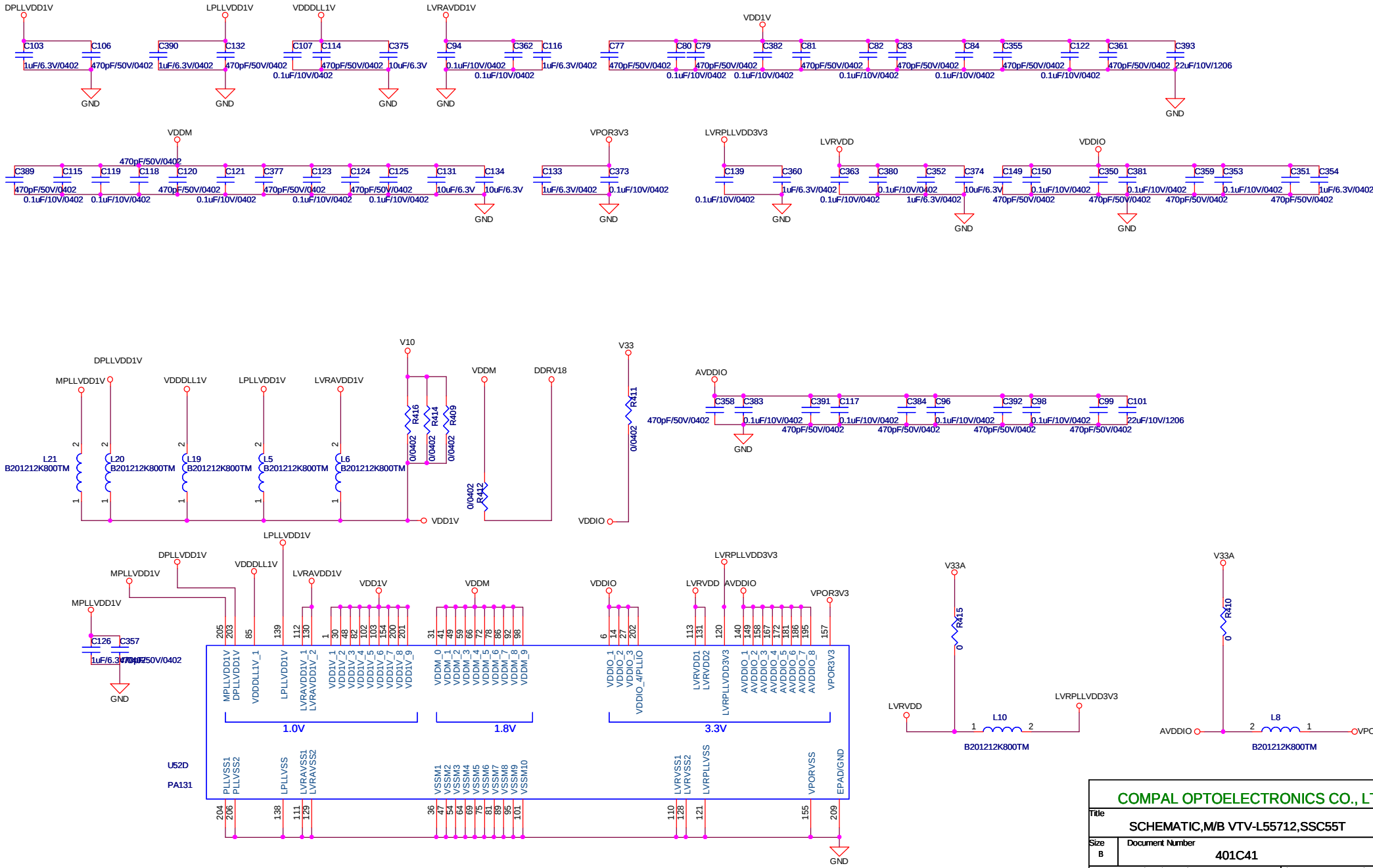


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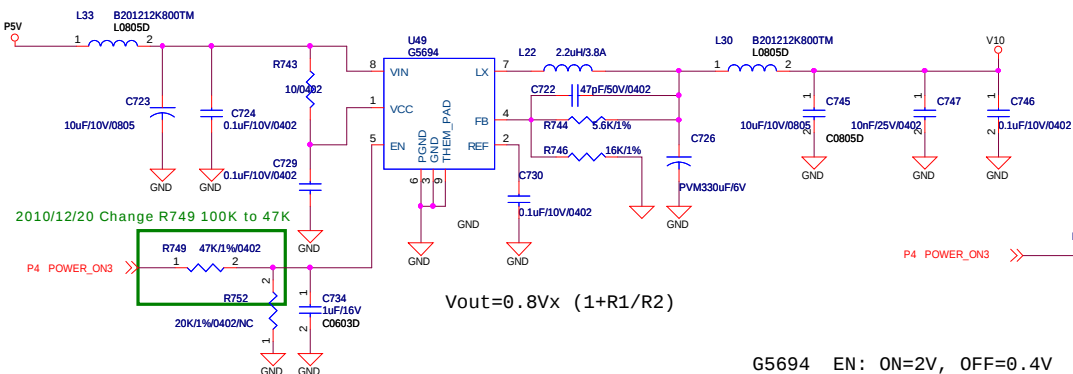




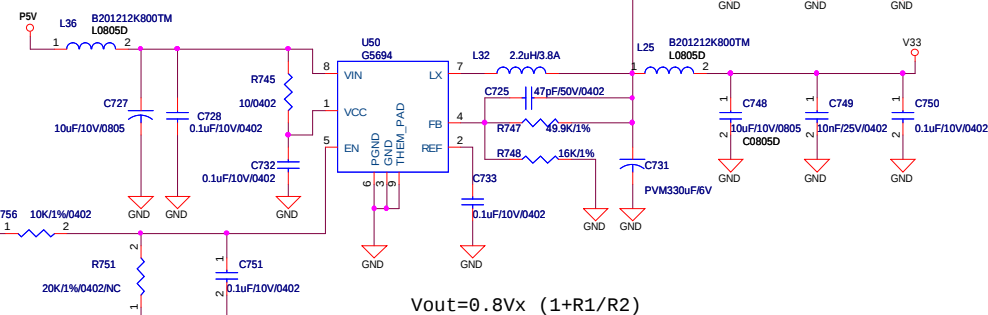


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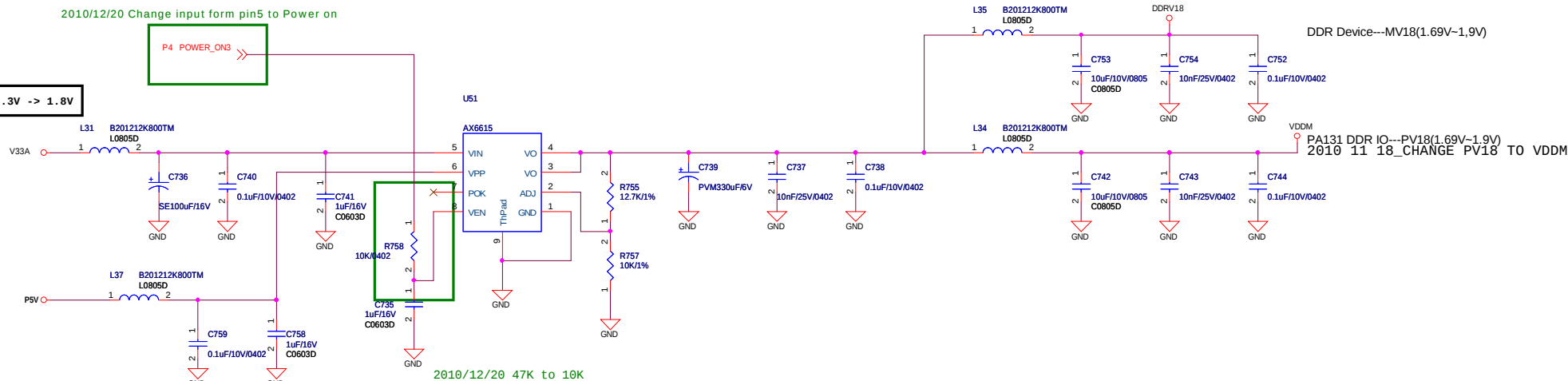
DC - DC FROM VCC TO 1.08V(3A)



DC - DC FROM VCC TO 3.3V(2A)



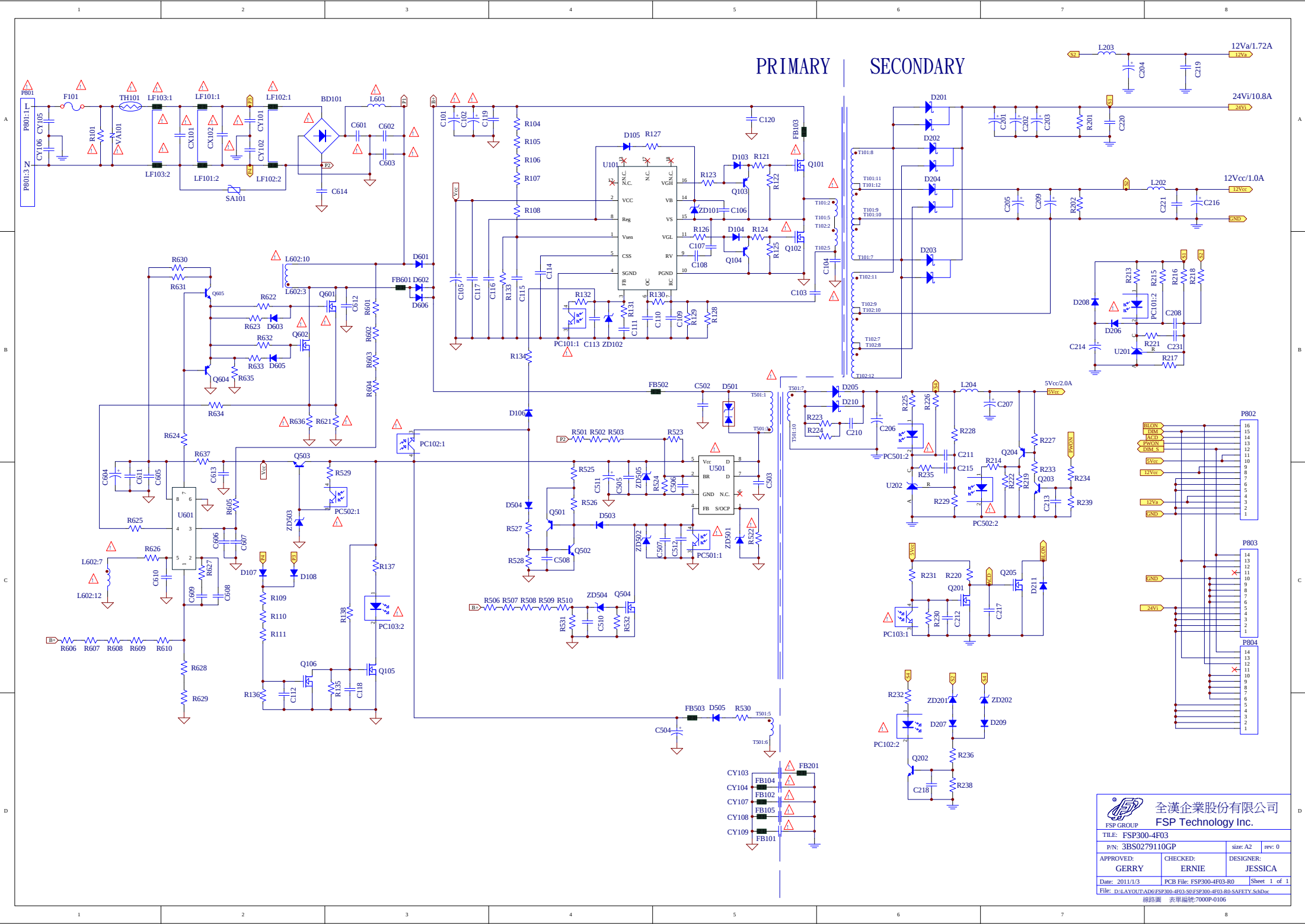
3.3V -> 1.8V



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SCHEMATIC DIAGRAM
POWER
55"(P554410-00)





全漢企業股份有限公司
FSP Technology Inc.

TITLE: FSP300-4F03

P/N: 3BS0279110GP

APPROVED: GERRY

DATE: 2011/1/3

size: A2

rev: 0

CHECKED: ERNIE

PCB File: FSP300-4F03-R0

DESIGNER: JESSICA

Sheet 1 of 1

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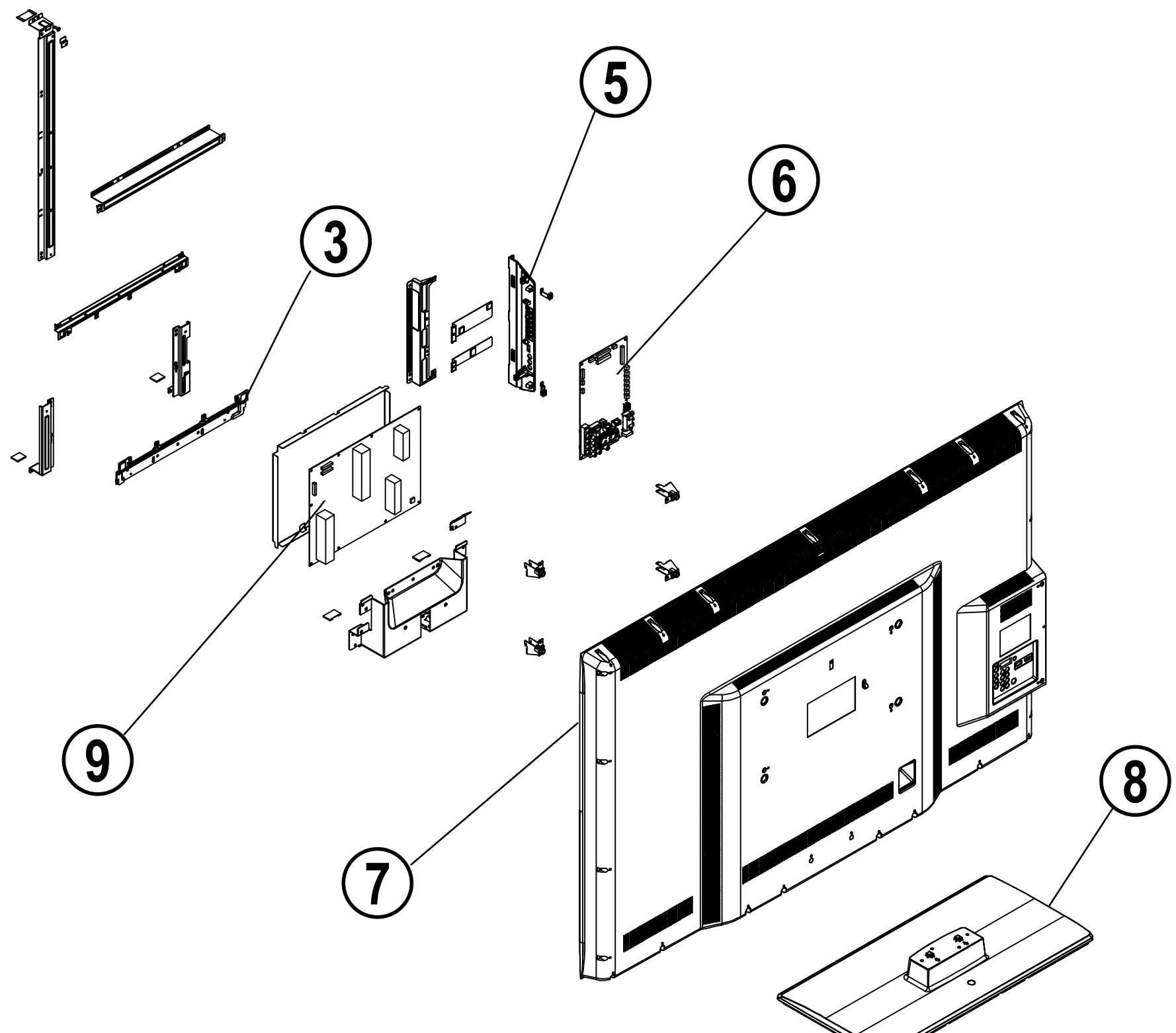
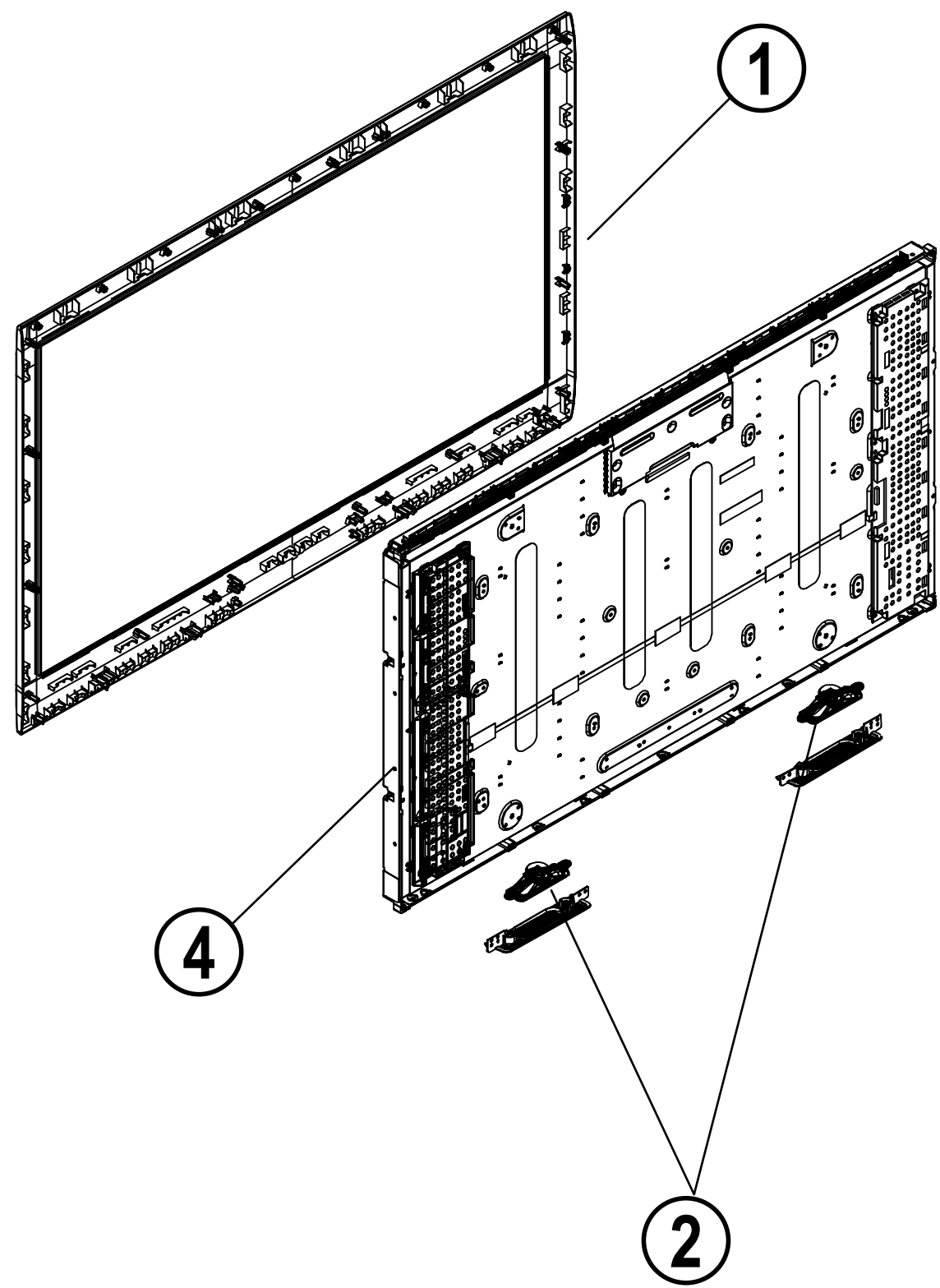
線路圖 表單編號:7000P-0106

DP55441-00

DP55441-01

APPENDIX-A: Main assembly**DP55441****Version:01**

REF. No.	DESCRIPTION	PARTS No.				REMARK
		CHASSIS No. : SSC55TTA10I	CHASSIS No. : SSC55TTZ10I	CHASSIS No. : SSC55TGA11I		
1	FRONT CABINET	CLAPSC550000I	←	←	1	
2	SPK SET(SSA19I)	CLCG101016C0I	←	←	2	
3	IR PCB ASS'Y	CL454C2U69L01	←	←	1	
4	LCD MODULE	CLAC6VT5500R2	←	LAC6VG5500R2	1	
5	KEY PLATE PCB ASS'Y	CLAPTD55T040I	←	←	1	
6	MAIN PCB ASS'Y	CL461C4169L01	←	CL461C4169L02	1	
7	BACK COVER ASSY	CLAPSC550010I	←	←	1	
8	BASE ASSY GLOSSY	CLAPSC550020I	←	←	1	
9	POWER PCB ASS'Y	CLPK101V2540I	←	←	1	
10	REMOTE CTRL	CLPK11V01180I	←	←	1	
11	USER'S MANUAL	CLHDA69C5500I	CLHDA69C5521I	CLHDA69C5500I	1	
12	EPS FORM(TOP LEFT)	CLFJSC55T010I	←	←	1	
13	EPS FORM(TOP RIGHT)	CLFJSC55T020I	←	←	1	
14	EPS FORM(BOTTOM LEFT)	CLFJSC55T030I	←	←	1	
15	EPS FORM(BOTTOM RIGHT)	CLFJSC55T040I	←	←	1	
16	EPS FORM(TOP MIDDLE)	CLFJSC55T050I	←	←	1	
17	EPE BAG for unit	CLHK3SC55000I	CLHK3SC55001I	CLHK3SC55001I	1	
18	CARTON	CLHB4SC55000I	←	←	1	
19	CARTON-DP55441-TRAY	CLHB4SC55010I	←	←	1	
20	ZIPPERED BAG for accessories	CLHK3OL77801I	←	←	1	
21	PE BAG-STAND	CLHK3SC55010I	CLHK3SC55011I	CLHK3SC55011I	1	
22	PWR CORD(S) (BLK)	CLGA05001063I	←	←	1	



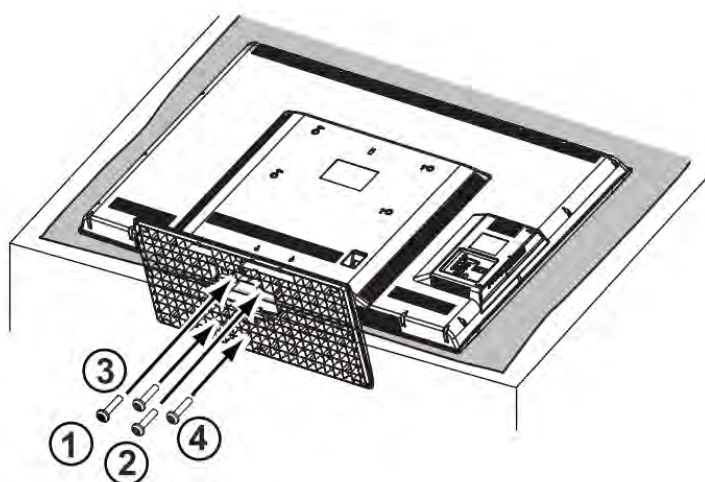
Removing or Installing the Stand

Cautions:

1. Carefully handle the unit during setup and consult authorized service personnel to ensure successful installation.
2. Before performing work spread cushioning over the base area to lay the Display on. This will prevent it from being damaged.
3. Disconnect the AC power cord firstly.

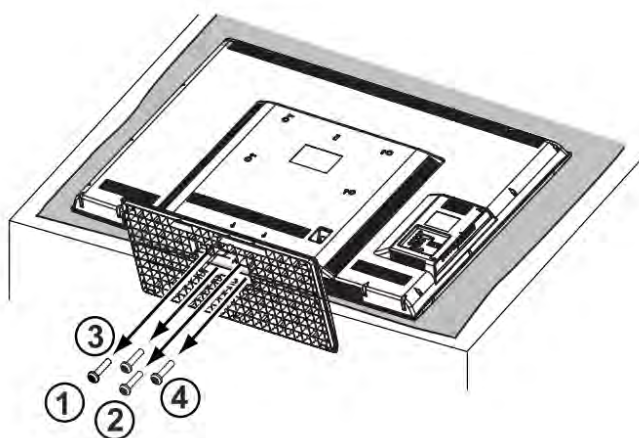
To remove the stand: (if will mounting)

1. Place the LCD TV screen facing down on a flat surface place where maintained with soft materials (such as a blanket) for protecting the display screen.
2. Release screw in 4 holes with screw driver.



To install the stand

1. Place the LCD TV screen facing down on a flat surface place where maintained with soft materials (such as a blanket) for protecting the display screen.
2. Secure the stand to the TV with 4 screw.



Note

- Do not remove the stand from the TV unless using an optional bracket to mount it.
- The appearance of the unit may differ from the actual one.

CANADA SERVICE MANUAL CHANGE LIST

[illegible]